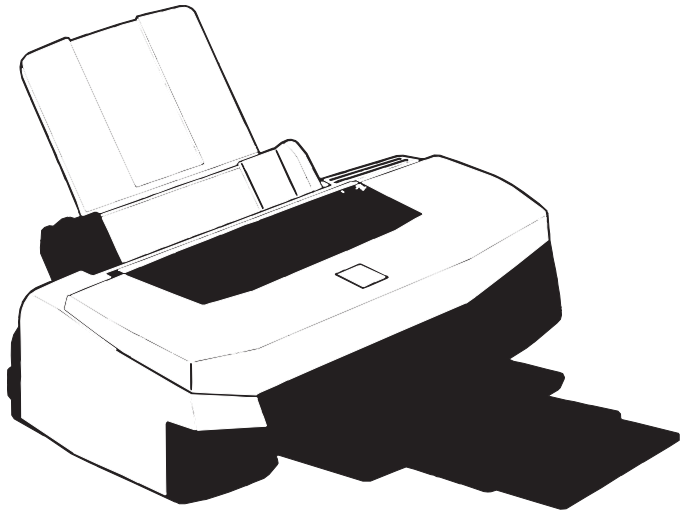

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PRECAUTIONS

Precautionary notations throughout the text are categorized relative to 1)Personal injury and 2) damage to equipment.

DANGER Signals a precaution which, if ignored, could result in serious or fatal personal injury. Great caution should be exercised in performing procedures preceded by DANGER Headings.

WARNING Signals a precaution which, if ignored, could result in damage to equipment.

The precautionary measures itemized below should always be observed when performing repair/maintenance procedures.

DANGER

1. ALWAYS DISCONNECT THE PRODUCT FROM THE POWER SOURCE AND PERIPHERAL DEVICES PERFORMING ANY MAINTENANCE OR REPAIR PROCEDURES.
2. NO WORK SHOULD BE PERFORMED ON THE UNIT BY PERSONS UNFAMILIAR WITH BASIC SAFETY MEASURES AS DICTATED FOR ALL ELECTRONICS TECHNICIANS IN THEIR LINE OF WORK.

About This Manual

This manual describes basic functions, theory of electrical and mechanical operations, maintenance and repair procedures of EPSON Stylus Photo 750. The instructions and procedures included herein are intended for the experienced repair technicians, and attention should be given to the precautions on the preceding page.

Contents

This manual consists of six chapters and Appendix.

CHAPTER 1. PRODUCT DESCRIPTIONS
Provides a general overview and specifications of the product.

CHAPTER 2. OPERATING PRINCIPLES
Describes the theory of electrical and mechanical operations of the product.

CHAPTER 3. TROUBLESHOOTING
Provides the step-by-step procedures for the troubleshooting.

CHAPTER 4. DISASSEMBLY AND ASSEMBLY
Describes the step-by-step procedures for disassembling and assembling the product.

CHAPTER 5. ADJUSTMENTS
Provides Epson-approved methods for adjustment.

CHAPTER 6. MAINTENANCE
Provides preventive maintenance procedures and the lists of Epson-approved lubricants and adhesives required for servicing the product.

APPENDIX Provides the following additional information for reference:

- Connector pin assignments
- Electric circuit boards components layout
- Exploded diagram
- Electrical circuit boards schematics

Symbols Used in This Manual

Various symbols are used throughout this manual either to provide additional information on a specific topic or to warn of possible danger present during a procedure or an action. Be aware of all symbols when they are used, and always read WARNING, CAUTION or NOTE messages.

Indicates an operating or maintenance procedure, practice or condition that, if not strictly observed, could result in injury or loss of life.

Indicates an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in damage to, or destruction of, equipment.

May indicate an operating or maintenance procedure, practice or condition that is necessary to accomplish a task efficiently. It may also provide additional information that is related to a specific subject, or comment on the results achieved through a previous action.

Revision Status

Revision	Issued Date	Description
Rev. A	December 14, 1998	First Release

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PRODUCT DESCRIPTION

1.1 Overview

This printer has better mechanism for the print quality and paper feeding than that of Stylus Photo and Stylus Photo 700. It also uses new print head and improved printing speed and through put.

1.1.1 General Characteristics

Major features of this printer are as follows;

- High quality color printing
  - Bi-directional printing at the resolution of 720 dpi.
  - 1440 (H) x 720 (V) dpi printing
  - Photo-MACH technology (6 color printing. CMYKcm)
  - Super micro dot, Super micro weave printing
- Built-in auto sheet feeder
  - Holds 100 cut-sheet (55g/m^2)
  - Holds 10 envelopes
  - Holds 10 transparency films
  - Holds 65 sheets of special paper
- Built-in 3 I/Fs
  - Bi-directional parallel I/F (IEEE-1284 level 1 device)
  - Mac serial I/F(up to approx.1.8Mbps)
  - USB I/F
- Windows/Macintosh exclusive

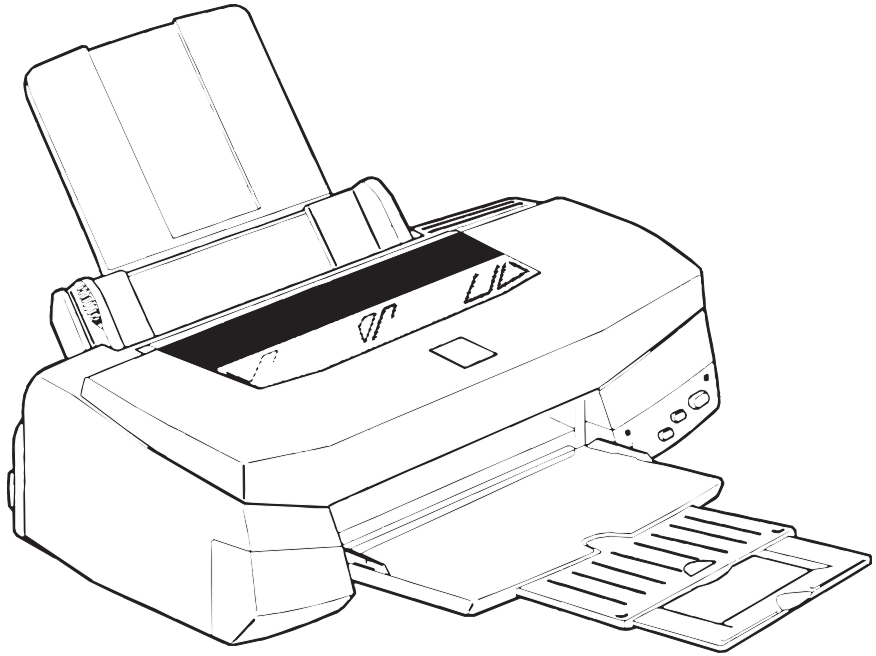

Figure 1-1. Exterior View of Stylus Photo 750

1.2 General Description

1.2.1 Printing

PRINTING METHOD

- ☐ On demand ink jet

NOZZLE CONFIGURATION

- ☐ 48 nozzles x 6 (Black, Cyan, Magenta, Yellow, Light Cyan, Light Magenta)

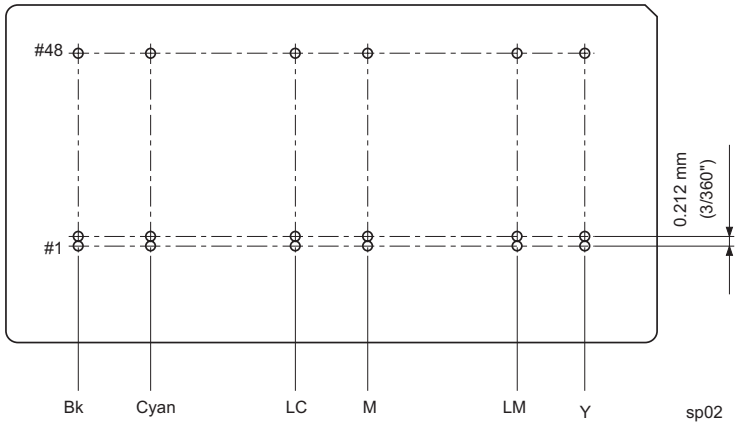

Figure 1-2. Nozzle Configuration

PRINTING DIRECTION

- ☐ Bi-direction with logic seeking

PRINTING SPEED AND PRINTABLE COLUMNS

- ☐ Character mode

Table 1-1. Printing Speed

Character Pitch	Printable columns	LQ speed
10 CPI (Pica)	80	200CPS**

** This value is the speed of one print-pass in which the 1/3 of character matrix is printed.

- ☐ Raster graphics mode

Table 1-2. Raster Graphics Mode

Horizontal resolution	Printable area	Available dot	CR Speed
180 dpi	8.26 inch	1488	20 IPS
360 dpi	8.26 inch	2976	20 IPS
720 dpi	8.26 inch	5952	20 IPS

CONTROL CODE

- ☐ ESC/P Raster
- ☐ EPSON Remote command

CHARACTER TABLES

- ☐ 2 international character sets
  - ■ PC437 (US, Standard Europe)
  - ■ PC850 (Multilingual)

TYPEFACE

- ☐ Bin map LQ font: EPSON Courier, 10 CPI

1.2.2 Paper Feeding

- ☐ Feeding Method: Friction feed with ASF
- ☐ Paper Path: Cut-sheet ASF(Top entry)
- ☐ Feeding Speed: 2.36 inches/sec (normal speed mode/continuous feeding)
  4.5 inches/sec (high-speed mode/continuous feeding)

1.2.3 Paper Specification

This section describes the printable area and types of paper which can be used in this printer.

CAUTION

- ■ **No curled, wrinkled, scuffing or torn paper be used.**
- ■ **Printing should be performed at room temperature for transparency and envelope.**

- ☐ Cut Sheet
  - ■ Size: A4(Width 210mm(8.3”) x Length 297mm(11.7”))
    Letter(Width 216mm(8.5”) x Length 279mm(11.0”))
    Legal(Width 216mm(8.5”) x Length 356 mm(14.0”))
    Statement (Width 139.7mm(5.5”) x Length 215.9mm (8.5”))
    B5(Width 182mm(7.2”) x Length 257 mm(10.1”))
    Executive(Width 184.2 mm(7.25”) x Length 266.7mm (10.5”))
    Photo Paper (Width 101.6mm(4”) x Length 152.4mm(6”))
  - ■ Thickness: 0.08mm(0.003”)-0.11mm(0.004”)
  - ■ Weight: 64g/m^2(17lb.) - 90g/m^2(24lb)
  - ■ Quality: Exclusive paper, Bond paper, PPC
- ☐ Transparency and Glossy Paper
  - ■ Size: A4(Width 210mm(8.3”) x Length 297mm(11.7”)
    Letter(Width 216 mm(8.5”) x Length 279mm(11.0”)
  - ■ Thickness: 0.075mm(0.003”) - 0.085mm(0.0033”)

  Note) Transparency printing is only available at normal temperature.
- ☐ Envelope
  - ■ Size: No.10 Width 241mm(9 1/2”) x Length 104.8mm(4 1/8”)
    DL Width 220mm(8.7”) x Length 110mm(4.3”)
    C6 Width 162mm(6.4”) x Length 114mm(4.5”)
  - ■ Thickness: 0.16mm(0.006”) - 0.52 mm(0.02”)
  - ■ Weight: 45g/m^2(12lb) - 75g/m^2(20lb.)
  - ■ Quality: Bond paper, Plain paper, Air mail

  Note) Envelope printing is only available at normal temperature.
  Keep the longer side of the envelope horizontally at setting.
- ☐ Index Card
  - ■ Size: A6 Index Card: Width 105mm(4.1”) x Length 148mm(5.8”)
    A5 Index Card: Width 148mm(5.8”) x Length 210mm (8.3”)
    5x8” Index Card: Width 127mm(5.0”) x Length 203mm (8.0”)
    10x8” Index Card: Width 127mm(5.0”) x Length 203 mm (8.0”)
  - ■ Thickness: Less than 0.23mm(0.0091”)

1.2.4 Printable Area

☐ Cut Sheet

The figure below shows printable area.

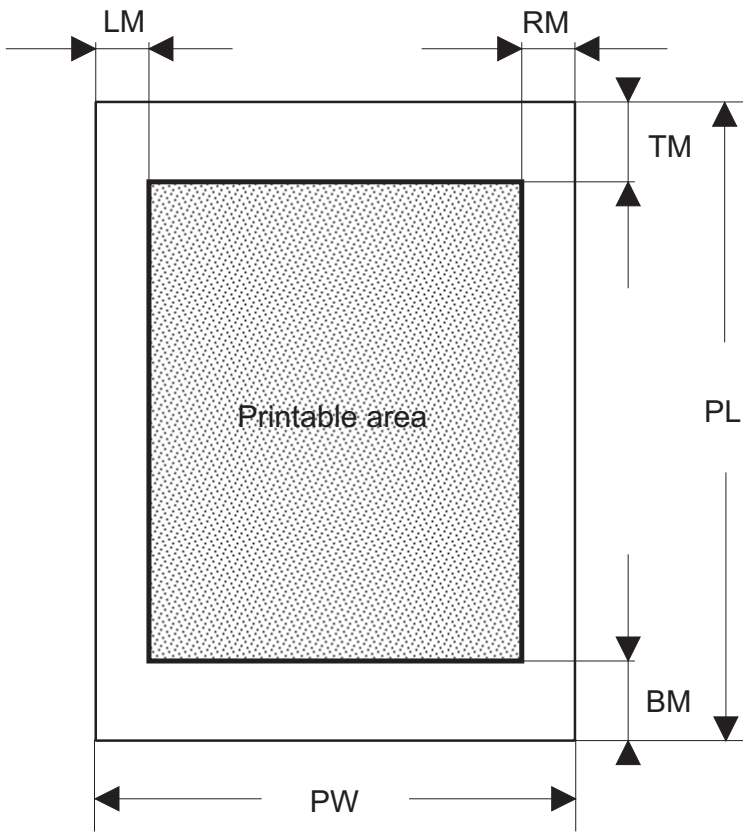

Figure 1-3. Printable Area

Table 1-3. Printable Area

Paper Size	Paper Width (typ)	Paper Length (typ.)	Left Margin (min.)	Right Margin (min.)	Top Margin (min.)	Bottom Margin (min.)
A4	210mm (8.3”)	297mm (11.7”)	3mm (0.12”)	3mm (0.12”)	3mm (0.12”)	14mm(0.54”) /3mm (0.12”)*
Letter	216mm (8.5”)	279mm (11.0”)	3mm (0.12”)	9mm (0.35”)	3mm (0.12”)	14mm(0.54”) /3mm (0.12”)*
Legal	216mm (8.5”)	356mm (14.0”)	3mm (0.12”)	9mm (0.35”)	3mm (0.12”)	14mm(0.54”) /3mm (0.12”)*
Statement	139.7mm (8.5”)	215.9mm (8.5”)	3mm (0.12”)	3mm (0.12”)	3mm (0.12”)	14mm(0.54”) /3mm (0.12”)*
B5	182mm (7.2”)	275mm (10.1”)	3mm (0.12”)	3mm (0.12”)	3mm (0.12”)	14mm(0.54”) /3mm (0.12”)*
Executive	184.2mm (7.25””)	266.7mm (10.5”)	3mm (0.12”)	3mm (0.12”)	3mm (0.12”)	14mm(0.54”) /3mm (0.12”)*
Photo Paper	101.6mm (4”)	152.4mm (6”)	3mm (0.12”)	3mm (0.12”)	3mm (0.12”)	14mm(0.54”) /3mm (0.12”)*

Note) Bottom margin can be set up to 3mm at minimum when the paper length is designated with “ESC(S” command.)However, there is the possibility that a printing scrambles in the area ranging from 3mm to 14mm, from the form lower end. When the paper length is not designated, the bottom margin must be wider than 14 mm.

☐ Envelope

Table 1-4. Envelope

Paper Size	LM(Left margin) (min.)	RM(RIght margin) (min.)	TM(Top margin) (min.)	BM(Bottom margin) (min.)
#10	28mm(1.10”)	3mm(0.12”)	3mm(0.12”)	14mm(0.55”)
DL	7mm(0.28”)	3mm(0.12”)	3mm(0.12”)	14mm(0.55”)
C6	3mm(0.12”)	3mm(0.12”)	3mm(0.12”)	14mm(0.55”)

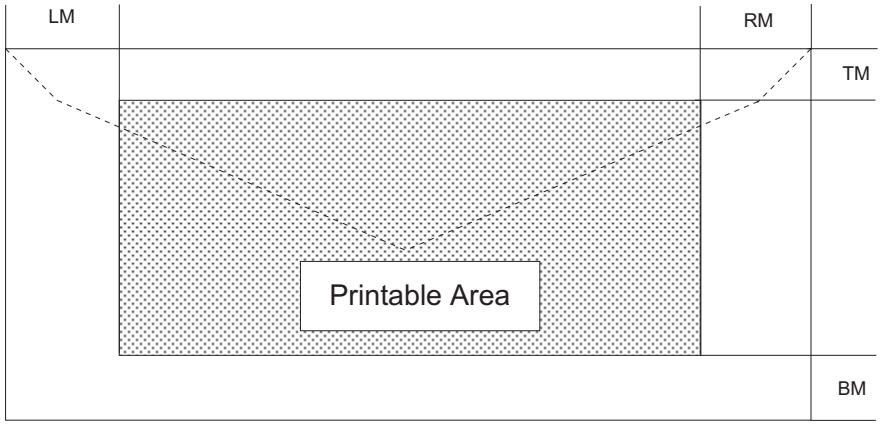

Figure 1-4. Printable Area

1.2.5 Adjust Lever Settings

The adjust lever located under the printer cover(right side) needs to be set for the proper paper setting according to the paper type.

Table 1-5. Setting Position of Adjust Lever

Paper	Lever position	Adjustment Value
Normal paper, Transparency sheet, Label	+	+0.9mm
Envelope	0	0mm

Figure 1-5. Adjust Lever

1.2.6 Environmental Conditions

- Temperature:
  - Operating: 10 to 35◦C(*3)
  - Non-operating: -20 to 60◦C(*1)

NOTE: *1 month at 40◦C and 120 hours at 60◦C*

- Humidity:
  - Operating: 20 to 80% RH(*2,*3)
  - Non-operating: 5 to 85% RH(*1,*2)

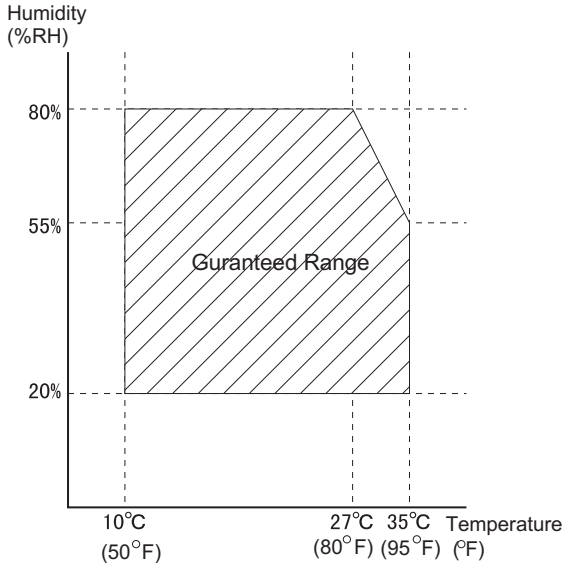

Figure 1-6. Environmental Condition

- Resistance to shock:
  - Operating: 1G, within 1ms
  - Non-operating: 2G, within 2ms(*1)
- Resistance to vibration:
  - Operating: 0.15G
  - Non-operating: 0.50G (*1)

NOTE: **1:with shipment container*
**2:without condensation*
**3:Refer to Figure1-6 for Environmental Condition.*

1.2.7 Ink Cartridge

1.2.7.1 Black Ink Cartridge

- Type: Exclusive cartridge
- Color: Black
- Print capacity: 540 pages/A4 (ISO/IEC1056 1 Letter Pattern at 360 dpi)
- Ink life: 2 years from production date
- Storage temperature: -20◦C to 40◦C(Storage within a month at 40◦C)
  -30◦C to 40◦C(Packing storage, within a month at 40◦C)
  -30◦C to 60◦C(Transit, within 120 hours at 60◦C and within a month at 40◦C)
- Dimension: 19.8mm(W) x 52.7 mm (D)x 38.5mm(H)

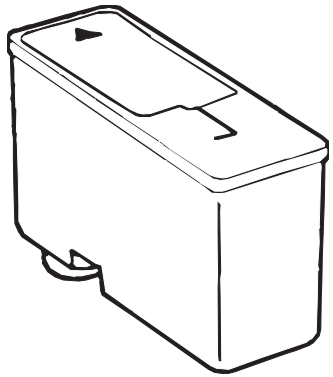

Figure 1-7. Black Ink Cartridge

1.2.7.2 Color Ink Cartridge

- Type: Exclusive cartridge
- Color: Magenta, Cyan, Yellow, Light Magenta, Light Cyan
- Print capacity: 220 pages/A4 (360 dpi, 5% duty each color)
- Ink life: 2 years from production date
- Storage temperature: -20◦C to 40◦C(Storage within a month at 40◦C)
  -30◦C to 40◦C(Packing storage, within a month at 40◦C)
  -30◦C to 60◦C(Transit, within 120 hours at 60◦C and within a month at 40◦C
- Dimension: 51.4mm(W) x 52.7 mm (D)x 38.5mm(H)

NOTE: *Ink cartridge can not be re-filled, only ink cartridge is prepared for article of consumption.Do not use the ink cartridge which was passed away the ink life.*
Ink will be frozen under - 4◦C environment. However, it will be usable again being placed at room temperature for 3 hours.

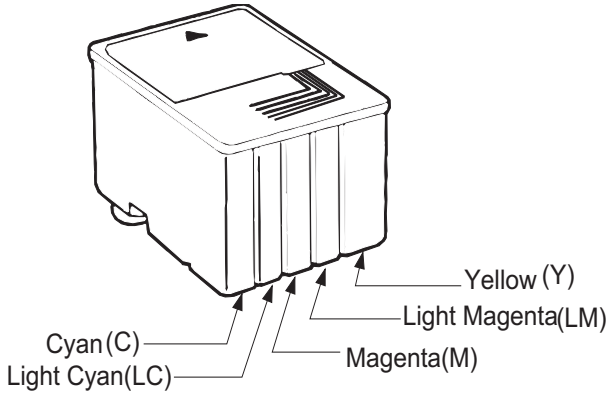

Figure 1-8. Color Ink Cartridge

1.2.8 Input Data Buffer

- Buffer: 256 Kbytes

1.2.9 Electric Specification

- 120V version
  - Rated voltage: AC 120V
  - Input voltage range: AC 99 -132V
  - Rated frequency range:50 - 60Hz
  - Input frequency range:49.5-60.5 Hz
  - Rated current: 0.4A(Max.0.5A)
  - Power consumption: Approx.18W(ISO/IEC 10561 Letter pattern) Energy Star compliant
  - Insulation Resistance:10 M ohms min. (between AC line and chassis, DC 500V)
  - Dielectric: AC 1000 V rms. 1 minute or AC 1200 V rms 1 second(between AC line and chassis)
- 220-240V version
  - Rated voltage: AC220-240V
  - Input voltage range: AC 198 -264V
  - Rated frequency range: 50 - 60Hz
  - Input frequency range:49.5-60.5 Hz
  - Rated current: 0.2A(Max.0.3A)
  - Power consumption: Approx.18W(ISO/IEC 10561 Letter pattern) Energy Star compliat
  - Insulation Resistance:10 M ohms min. (between AC line and chassis, DC 500V)
  - Dielectric: AC 1500 V rms. 1 minute (between AC line and chassis)

1.2.10 Reliability

- Total print volume: 10,000 pages(A4, Letter)
- Print Head Life: 2000 million dots/nozzle

1.2.11 Safety Approvals

- 120V version
  - Safety standard: UL1950 with D3
CSA22.2 No.950 with D3
  - EMI: FCC part 15 subpart B classB
CSA C108.8 class B
- 220-240V version
  - Safety standard: EN60950(VDE, NEMKO)
EN55022(CISPR Pub.22) class B
AS/NZS 3548 class B

1.2.12 Acoustic noise

- Level: Approx. 47 dB(A) (According to ISO 7779)

1.2.13 CE Marking

- 220-240 V version
  - Low Voltage Directive 73/23/EEC: EN60950
  - EMC Directive 89/336/EEC: EN55022 Class B
    EN61000-3-2
    EN61000-3-3
    EN50082-1
    IEC801-2
    IEC801-3
    IEC801-4

1.2.14 Printer Language and Emulation

- Printer Language: ESC/P Raster
  EPSON Remote

1.2.14.1 ESC/P Control Codes

< Character mode >

- General operation:
  - Initialize printer: ESC@
- Paper feeding:
  - Form Feed FF
  - Line Feed LF
  - Carriage Return CR

< Graphic Mode >

- General operation:
  - Initialize Printer: ESC @
  - Unidentical Printing: ESC U
  - Print a Image: ESC ACK
  - CSF Mode Control: ESC EM
- Paper Feeding:
  - Form Feed: FF
  - Line Feed: LF
  - Line Spacing: ESC+
  - Carriage Return: CR
- Page format
  - Page Length: ESC (C
  - Top/Bottom Margin: ESC (c
  - Paper Size: ESC (S
- Print position motion
  - Horizontal Print Position: ESC $, ESC\, ESC($, ESC(\
  - Vertical Print Position:ESC(V, ESC(v
- Spacing:
  - Graphics Mode: ESC (G
- Graphics:
  - Raster Graphics: ESC.
  - Microweave control: ESC (i

- Dot size control: ESC (e
- Raster header: ESC (D
- Raster body: ESC i

- Color:
  - Printing Color: ESC r, ESC (r
- EEPROM control:
  - EEPROM control: ESC |

1.3 Parallel Interface

This printer has IEEE-1284 parallel interface, RS-423 serial interface and USB interface as standard.

1.3.1 Parallel Interface(Forward channel)

Forward channel is the mode to transfer the ordinary printing order to the printer side from the PC side.

Table 1-6. Parallel I/F

Item	Specification
Transmission mode	8bit parallel, IEEE-1284 compatibility mode
Synchronization	By STROBE pulse
Handshaking	By BUSY and ACKNLG signal
Signal Level	TTL compatible level
Adaptable connector	57-30360(amphenol) or equivalent

BUSY signal is set high before setting either-ERROR low or PE high and is held high until all these signals return to their inactive state.

BUSY signal is set high level in the following cases.

-During data entry (see Data transmission timing)
-When input data buffer is full
-During -INIT signal is at low level or during hardware initialization
-During printer error (See-ERROR signal)
-When the parallel interface is not selected.

ERROR signal is at low level when the printer is in one of the following states.

-Printer hardware error (fatal error)
-Paper-out error
-Paper jam error
-Ink-out error

PE signal is at high level during paper-out error.

Table 1-7. Connector pin assignment and signals

Pin. No	Signal Name	Return GND pin	In/Out	Function Description
1	-STROBE	19	In	The strobe pulse. Read-in of data is performed at the falling edge of this pulse.
2-9	Data0-7	20-27	In	The DATA 0 through DATA7 signals represent data bits 0-7, respectively.Eacj signal is at high when data is logical 1 and low level when data is logical 0.
10	-ACKNLG	28	Out	This signal is a negative pulse including that the printer can gain accept data.
11	BUSY	29	Out	A high signal indicates that the printer cannot receive data.
12	PE	28	Out	A high signal indicates paper-out error.
13	SLCT	28	Out	Always at high level when the printer is powered on.
14	-AFXT	30	In	Not used.
31	-INIT	30	In	This falling edge of a negative pulse or a low signal on this line causes the printer to initialize Minimum 50 us pulse is necessary.
32	-ERROR	29	Out	A low signal indicates printer error condition.
36	-SLIN	30	In	Not used.

Pin. No	Signal Name	Return GND pin	In/Out	Function Description
18	Logic H	---	Out	Pulled up to +5V via 3.9K ohm resistor.
35	+5V	---	Out	Pulled up to +5V via 3.3 K ohm resistor.
17	Chassis GND	---	---	Chassis GND.
16,33 19-30	GND	---	---	Signal GND.
15,34	NC	---	---	Not connected.

NOTE: *In/Out refers to the direction of signal flow from the printer's point of view.*

1.3.2 Parallel Interface(Reverse channel)

Reverse channel is used to transfer the information data from the printer side to the PC side.

Table 1-8. Connector pin assignment and signals

Item	Specification
Transmission mode	IEEE-1284 nibble mode
Synchronization	Refer to the IEEE-1284 specification
Handshaking	Refer to the IEEE-1284 specification
Data trans.timing	Refer to the IEEE-1284 specification
Signal Level	TTL compatible level
Adaptable connector	57-30360(amphenol) or equivalent

- Extensibility request: The printer responds affirmatively when the extensibility request values are 00H or 04H, that mean,
  00H: Request Nibble Mode Reverse Channel Transfer.
  04H: Request Device ID;
  Return Data Using Nibble Mode Rev Channel Transfer

- Device ID: The printer sends following device ID string when it is requested.

  - When IEEE1284.4 protocol is effective:
    [00H] [57H]
    MFG:EPSON;
    CMD:ESCPL2,BDC,D4;
    MDL:Stylus[SP]Photo[SP]750;
    CLS:PRINTER;
    DES:EPSON[SP]Stylus[SP]Photo[SP]750;

- When IEEE1284.4 protocol is NOT effective:
  [00H] [57H]
  MFG:EPSON;
  CMD:ESCPL2,BDC;
  MDL:Stylus[SP]Photo[SP]750;
  CLS:PRINTER;
  DES:EPSON[SP]Stylus[SP]Photo[SP]750;

NOTE: *[00H] denotes a hexadecimal value of zero.*
[SP] denotes a space character(20H).
MDL and DES values depend on the EEPROM setting.

Table 1-9. Connect pin assignment and signals

Pin. No	Signal Name	Return GND pin	In/Out	Function Description
1	HostClk	19	In	Host clock signal.
2-9	Data0-7	20-27	In	The DATA 0 through DATA7 signals represent data bits 0-7, respectively.Eacj signal is at high level when data is logical 1 and low level when data is logical 0. These signals are used to transfer the 1284 extensibility request values to the printer.
10	PtrClk	28	Out	Printer clock signal.
11	PtrBusy/ DataBit-3,7	29	Out	Printer busy signal and reverse channel transfer data bit3 or 7.
12	AckDataReq/ DataBit-2,6	28	Out	Acknowledge data request signal and reverse channel transfer data bit2 or 6.
13	Xflag/ DataBit-0,4	28	Out	X-flag signal and reverse channel transfer data bit 1 or 5.
14	HostBusy	30	In	Host busy signal.
31	-INIT	30	In	Not used.
32	-DataAvail/ DataBit-0,4	29	Out	Data available signal and reverse channel transfer data bit 0 or 4.
36	1284-Active	30	In	1284 active signal.
18	Logic H	---	Out	Pulled up to +5V via 3.9K ohm resistor.
35	+5V	---	Out	Pulled up to +5V via 3.3 K ohm resistor.
17	Chassis GND	--	--	Chassis GND.
16,33 19-30	GND	---	---	Signal GND.
15,34	NC	---	---	Not connected.

NOTE: *Following lists "Notes" when using the parallel interface.*

1. "Return GND pin" in the table means twist pair return and is connected to the signal GND level.
Also, these cables are shielded wires and it is effective means to connect to each chassis GND in the PC and printer for electrostatic noise.

1.3.3 Serial Interface

This section shows specification for serial interface I/F.

Table 1-11. Serial interface

Item	Specification
Standard	Based on RS-423
Synchronization	Synchronous
Bit rate	Approx. 1.8Mbps
Word format	• Start bit 1bit • Data bit 8bit • Parity bit none • stop bit 1bit
Handshaking	X-ON/X-OFF, DTR protocol
Adaptable connector	8-pin mini circular connector
Recommended interface cable	Apple System Peripheral-8 cable

Table 1-12. Connector pin assignment and signals

Pin No.	Signal Name	In/Out	Function Description
1	SCLK	Out	Synchronous clock
2	CTS	In	Clear to send
3	TxD-	Out	Transmitt data-
4	S.G.	In	Signal ground
5	RxD-	In	Receive data-
6	TxD+	Out	Balanced Transmit+
7	DTR	Out	Data terminal ready
8	RxD+	In	Balanced Receive+

NOTE: *In/Out refers to the direction of signal flow from the printer's point of view.*

Following figure shows port arrangement of serial I/F connector.

Figure 1-10. Serial I/F Connector Port

Following table shows timing relation of DTR, X-ON/X-OFF handshaking.

Table 1-13. X-ON/X-OFF, DTR protocol

State	Buffer space	X-on/X-off	DTR
Busy	Less than 3072 bytes	Send X-OFF code	Off
Ready	More than 5120 bytes	Send X-ON code	On

1.3.4 USB(Universal Serial Bus) Interface

Following shows specification.

- Standard: Based on
  - Universal Serial Bus Specifications Revision 1.0
  - Universal Serial Bus Device Class Definition for Printing Devices version 1.0
- Bit rate: 12Mbyte(Full Speed Device)
- Data encording: NRZI
- Adaptable connector: USB Series B
- Recommended cable length: 2 meters

Table 1-14. Connector pin assignment and signals

Pin. No	Signal Name	I/Out	Function Description
1	VCC	--	Cable power. Maximum power consumption is 100mA.
2	-Data	Bi-directional	Data
3	+Data	Bi-directional	Data. Pull up to +3.3V via 1.5K ohm resistor.
4	Ground	--	Cable ground.

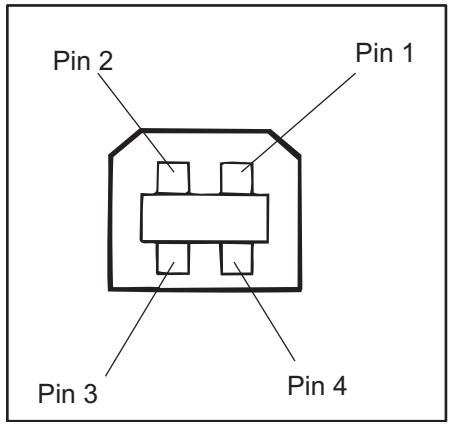

Figure 1-11. USB Interface Port

1.3.5 Prevention of data transfer time-out on the host

Generally, hosts abandon data transfer to peripherals when a peripheral is in busy state for dozens of seconds continuously. To prevent hosts from acting this kind of time-out, the printer receives data very slowly, several bytes per minute, even if the printer is in busy state. This slowdown starts when the remaining input buffer is less than several hundreds of bytes. Finally, the printer is in busy state continuously when the input buffer is full.

1.3.6 Interface selection

The printer has 3 built-in interfaces; Parallel I/F, Mac serial I/F and USB I/F. These interfaces are selected automatically.

- Automatic selection
  In this automatic interface selection mode, the printer is initialized to the idle state scanning which interface receives data when it is powered on. Then the interface that receives data first is selected. When the host stops data transfer and the printer is in the stand-by state for the seconds, the printer is returned to the idle state. As long as the host sends data or the printer interface is busy state, the selected interface is let as it is.
- Interface state and interface selection
  When the parallel interface is not selected, the interface got into the busy state. When the serial interface is not selected, the interface sets the DTR signal MARK. When the printer is initialized or returned to the idle state, the parallel interface got into the ready state, the serial interface sets the DTR signal SPACE. Caution that the interrupt signal such as the -INIT signal on the parallel interface is not effective while that interface is not selected.

1.3.7 IEEE 1284.4 protocol

The packet protocol described by IEEE1284. 4 is supported on the parallel I/F and USB I/F. Three function modes of IEEE1284.4 protocol, “On”, “Off” and “Auto” are available for each I/F, and one of them is selected according to the value in EEPROM address 0Ah and 0Ch.

On: Communication in IEEE1284.4 packet mode is started by receiving a magic string(1284.4 synchronous commands). Until a magic string is received, other commdands are discarded.
Off: Communication is carried out in the conventional mode. A magnetic string(1284.4 synchronous commands) is discarded.
Auto: Communication is carried out in the conventional mode until a magic string(1284.4 synchronous commands) is received. By receiving a magic string, communication in IEEE1284.4 packet mode is started.

NOTE: *The packet protocol of IEEE1284.4 allows a device to carry on multiple exchanges or conversations which contain data and /or control information with another device at the same time across a single point to point link. The protocol is not, however, a device control language. It does provide basic transport-level flow control and multiplexing services. The multiplexed logical channels are independent of each other and blocking of one has no effect on the others. The protocol operate over IEEE1284.*

1.4 Function

1.4.1 Control Code

This printer is operated with the raster graphics control code based on the ESC/P2 control line. Refer to “ESC/PV2 Reference Manual” and “ESC/P2 specification” for each command and ESC sequence.

1.4.2 Bi-directional Command

- Remote Setting Command
  Refer to “Remote Command Specification” for details.

1.4.3 Control Panel

There are 2 non-lock type push switches, 1 lock type push switch and 4 LEDs. The figure below shows the exterior view of the control panel.

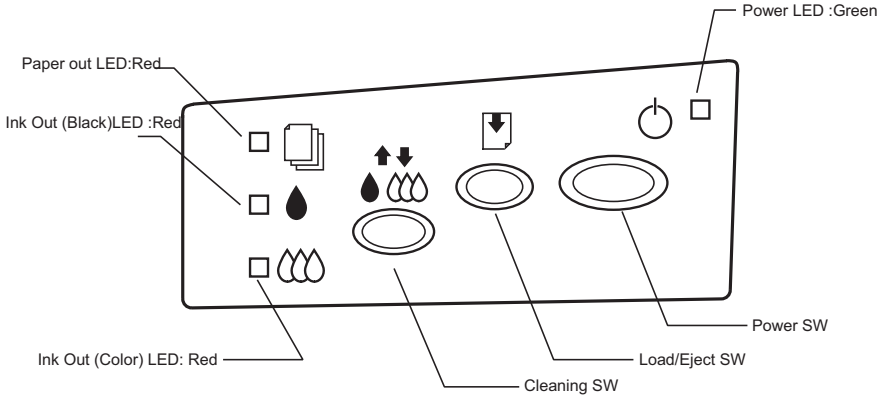

Figure 1-12. Control Panel

1.4.3.1 Switches

Since this printer does not have so many switches, each button has several functions. The tables below show their functions and how to enter those functions for each switch.

Table 1-15. Panel functions in normal state

Switch	Function
Load/Eject (Less than 2 seconds)	• Load or eject paper • When the carriage is on the position for exchanging ink cartridge, return it to the home position.
Load/Eject (for 2 seconds)	• Start the ink cartridge exchange sequence; i.e. move the carriage to carriage exchange position.
Cleaning (for 2 seconds)	• Start cleaning the print head. • In the condition of “Ink Low” or “No Ink Cartridge”, start the ink cartridge exchange sequence.
Cleaning (Less than 2 seconds)	• When the carriage is on the position for exchanging ink cartridge, return it to the home position.

Table 1-16. Panel function with turning on

Switch to press when turning on	Function
Load/Eject	• Start status-printing.*1
Cleaning	• Change code pages/Select IEEE1284.4 mode for parallel I/F*2.
Load/Eject + Cleaning	• Start special setting mode.*3

NOTE: **1: Refer to Table 1-17, “Status printing,” on page 22.*
**2:Not described in the User’s manual. (not open to the users)*
**3:See the Table in the section “Special Setting Mode”.*

*1(from the previous page): According to the content of 35H of EEPROM, one of the following actions is carried out.

Table 1-17. Status printing

Content of 35H of EEPROM, [bit7] [bit6]	Action
00	• Print firmware version, ink counter, selected code page and nozzle check pattern
11	
01	• Start hex-dump printing.
10	• Start self test printing.

1.4.4 Special Setting Mode

CAUTION

- **Unlike the previous models, since this printer does not have EEPROM All Clear function, do not perform this operation except for the purpose of canceling the maintenance errors.**
- **Be sure to replace the waste ink pad located in the lower case, when canceling the maintenance error.**
- **If you replace the waste ink pad regardless of the maintenance error, be sure to perform this operation.**

After turning the power on while pressing Load/Eject and “Cleaning” switches, “Paper Out” indicator blinks for 3 seconds. By pressing the following switches during this period, following action is carried out.

Table 1-18. Special setting mode

Switch	Function
Load/Eject	• Initialize EEPROM* and reset time IC.
Cleaning (for 10 seconds)	• Reset the ink overflow counter in EEPROM.

NOTE: **Waste ink counter value and Timer IC counter value are initialized.*

1.4.5 LED Indications

There are 4 LEDs in this printer.

1. Power
   Lights when the operate switch is “ON”, and AC power is supplied.

2. Paper Out
   Lights during the paper-out condition, and blinks during the paper-jam condition.

3. Ink Out(Black)
   Lights during no Black ink condition, and blinks during the Black ink low condition.

4. Ink Out (Color)
   Lights during no Color ink condition, and blinks during the Color ink low condition.

See the table on the next page for more detailed LED indications. Since LED indicates the various errors and current printer operations, LED indications enable to find out the proper repair operation.

Table 1-19. Printer Status displayed on the control panel

Printer Status	Indicators				Priority
	Power	Ink Out (Black)	Ink Out (Color)	Paper Out	
Power on condition	On	--	--	--	9
Ink sequence	Blink	--	--	--	6
Ink cartridge exchange mode	Blink	--	--	--	5
Data processing	Blink	--	--	--	8
Paper out*1	--	--	--	On	4
Paper jam*1	--	Off	Off	Blink	3
No ink cartridge or Ink out (black)	--	On	--	--	7
Ink level low (black)	--	Blink	--	--	7
No ink cartridge or Ink out (color)	--	--	On	--	7
Ink level low (color)	--	--	Blink	--	7
EEPROM and Timer IC reset*2	--	On (for 1 second)	On (for 1 second)	On (for 1 second)	--
Maintenance Request	Blink	Blink	Blink	Blink	2
Fatal Error*1	Blink	On	On	Blink	1

NOTE: **1 Refer to "Fatal Error" under the "Errors" on page -23.*
**2 EEPROM reset does not mean to erase all address in EEPROM. (See "Special Setting Mode" on page -22)*
**3 -- in the table above means no change.*

1.4.6 Errors

In this printer, when the following conditions are detected. the printer goes to the error condition, sets ERROR signal Low and BUSY signal High and stops receiving the data. The printer becomes unable to print at this time. However, if the printer communicated by IEEE1284.4 protocol, the printer does not become unprintable state.

- Ink Out
  When the printer runs out most of the ink of any one color, it indicates ink-low warning and keeps printing. When the print runs out the whole ink of any one color, it indicates ink-error and stops printing. Exchanging ink cartridges is required on this state. An ink cartridge taken out once should not be used again. Re-installation of the cartridge upsets the ink level detection and may cause a serious problem to the print head as a result.

Never use or re-install the cartridge, which is taken out once. Re-installation of the used cartridge disturbs the normal ink out detection.

- Paper out
  When the printer fails to load a sheet, it becomes "paper out error" condition.
- Paper Jam
  When the printer fails to eject a sheet, it becomes "paper jam error" condition.

☐ No Ink Cartridge
When the printer detects that ink-cartridge comes off, it becomes “No ink cartridge error” condition.

CAUTION

- **When you need to perform test print after the repair service, performing the status-printing(see “Control Panel” on page -21) provides the discharged ink condition from the all ink nozzles and the current value of the waste ink counter. Be sure to check that the counter value still has enough capacity.(if the value is closer to 2700 or not)**
- **If there is no enough capacity, exchange the waste ink absorber and find out if it is necessary to reset EEPROM or not. If you need to reset EEPROM, refer to “Special Setting Mode” on page -22.**

☐ Maintenance request
When the total quantity of ink wasted with cleaning and flushing reaches the limit, the printer indicates this error and stops printing. The absorber in the printer enclosure should be replaced with a new one by a service person. The counter is added by points and its limit is as follows.

- 37000 point = Approx. 418ml

☐ Fatal Errors
When the printer detects a problem with controlling the mechanical components or assessing the CG, it becomes “fatal error” condition.

- Control Error
  Defective parallel adjustment, defective HP detection, scarcity of lubrication on the carriage shaft etc.
- Logic operation error
  Shorted circuit, etc.

1.4.7 Initialization

There are 3 types of initialization.

☐ Power-on Initialization
This printer initializes itself when it is turned on, or when it recognizes the cold-reset command (remote RS command). On this initialization, following actions are performed.

- Initialize mechanical components
- Clear the input buffer
- Clear the print buffer
- Set default values

☐ Operator initialization
This printer initializes itself when it is turned off and is turned on again within 10 seconds, or when it recognizes the -INIT signal(negative pulse) on parallel interface. On this initialization, following actions are performed.

- Cap the print head
- Eject paper
- Clear the input buffer
- Clear the print buffer
- Set default values

☐ Software initialization
“ESC@” command also initializes the printer. On this initialization, following actions are performed.

- Clear the print buffer
- Set default values

1.4.8 Initialization Setting

This printer initializes following settings as initialization setting when the initialization is performed. Also, among the items of panel setting, default setting and remote command settings, the items which can be stored are also initialized as initialization setting.

- Page position: Page heading location as present paper location
- Line spacing: 1/6 inch
- Right margin position: 80 lines
- Left margin position: first line
- Character pitch: 10 CPI
- Printing mode:Text mode (Not raster graphics mode)

1.4.9 Physical Specification

- Weight: 5.2Kg
- Dimensions: 429 mm(W) x 260.9 mm(D) x 167.1 mm (H) (without sheet support)

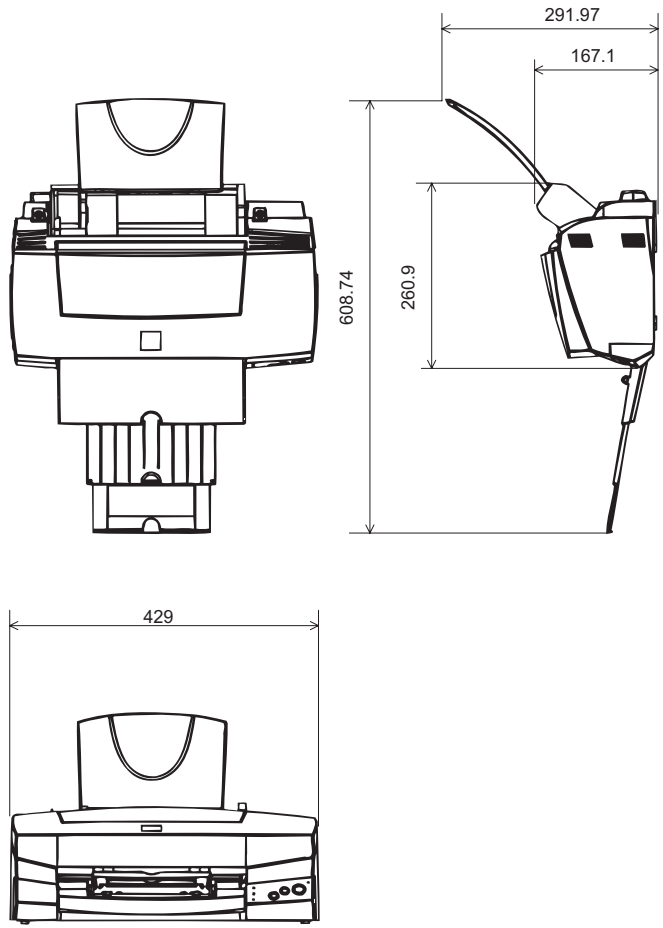

Figure 1-13. Dimension of Stylus Photo 750

1.4.10 Consumables and options

The consumables and options for this printe are following;

Table 1-20. Consumables

Classification	No.	Name
Consumables	IC1BK02	Ink Cartridge(black)
	IC5CL02	Ink Cartridge(color)

&+$37(5

5

OPERATING PRINCIPLES

2.1 Overview

This section describes operating principles of the printer mechanism and electric circuit boards (C259Main, C257PSB and C209PNL).

2.1.1 Printer Mechanism

This printer is composed of Print Head, Carriage Mechanism, Hopper Drive Mechanism, Paper Feed Mechanism, Pump Mechanism and Carriage Lock Mechanism.

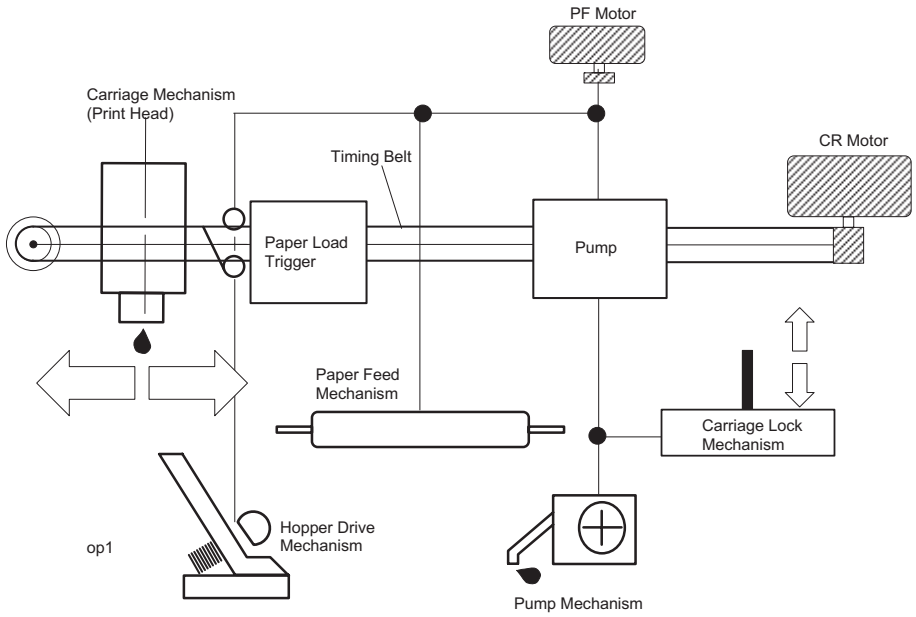

Figure 2-1. Printer Mechanism

- Print Head
  Each color 120 DPI, 48 nozzle x 6 colors(Black, Cyan, Light Cyan, Magenta, Light Magenta, Yellow). Head is mounted at the carriage mechanism.
- Carriage Mechanism
  This mechanism consists of Carriage Motor(CR Motor), Carriage, Timing Belt, CR Guide Shaft, CR Guide Frame and Carriage Home Sensor (HP Sensor).
  - Carriage
    Print Head is mounted.
  - CR Motor
    This motor moves the carriage to the appointed position on the platen for the printing operation by using the timing belt.
  - CR Guide Shaft
    Since this guide shaft is ecentric shaft, it is rotated by the adjust lever and sets the platen gap “0“ or “+”. This prevents the print head and print surface from contacting and rubbing.
- Paper Feed Mechanism
  This mechanism consists of Paper Feed Motor(PF Motor), PF Roller, Paper Feed Roller Line and Paper Guides.
- Hopper Drive Mechanism
  This mechanism is installed at the rear side of the printer and consists of Paper Pick Up Roller, One-way Clutch and Hopper. Operation is performed by the PF motor, when the carriage is around the left edge. Paper is set to the hopper. One-way clutch rotates the Pick Up roller for paper loading by using the driving power of the PF motor.

- Pump Mechanism
  This mechanism consists of Pump and Cap parts.
  - Cap Parts
    This protects the surface of print head nozzle from being dry or from being attached with dust.
  - Pump Parts
    This part receives motive power from the PF motor and absorbes bubbles and viscous ink on the print head nozzle by using the motor rotation and drains them to the waste ink pad.
- Carriage Lock Mechanism
  This prevents the print head from separating from the cap parts by the shocks from outside. Using the motive power from the PF motor, this mechanism controls the lock lever, which secures the carriage, and fixes or releases the carriage.

2.2 Operating Principles of Electric Circuit

The electric circuit of this printer consists of the following circuits.

- ☐ C259 Main Control Circuit
- ☐ C257 PSB Power Supply Circuit
- ☐ C209 PNL Panel Board

Also, the head drive circuit is mounted on the print head. In this section, the operating principles of C257PSB board and C259 Main board. The figure below shows the block diagram of the electric circuit.

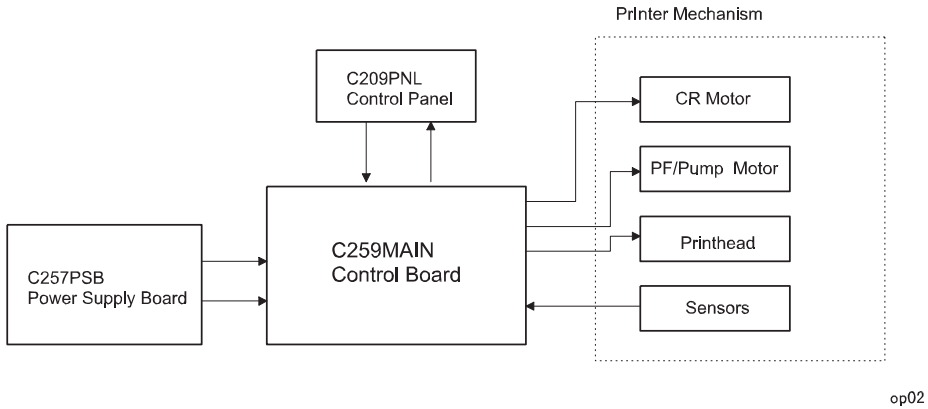

Figure 2-2. Electric Circuit Block Diagram

2.2.1 C257 PSB Power Supply Circuit

The power supply circuit in the printer uses RCC(Ringing Choke Converter) circuit method, and generates and outputs 2 types of voltages which are necessary for the printer operation.

Table 2-1. Output Voltage

Voltage	Usage
+42VDC	• Motors • Print Head common voltage
+5VDC	• C259Main Control Circuit Logic • C209 PNL Panel Board • Sensors

In this printer, even if the power switch is turned off in the middle of the printing operation, application of the secondary switch enables the printer to supply the voltage to the power/logic lines at the main board side for at least 30 seconds. Therefore, even if the switch is turned off in the middle of the printing operation, the power will be turned off after the capping operation is completed. This prevents the print head from being left uncapped and dry, and also ink leaking.

AC voltage input from the AC inlet passes through the Filter Circuit at first, which removes the high frequency component, then, goes to Full Wave Rectifier Circuit and Smoothing Circuit and is converted to DC power supply. Then, this direct voltage is led to the Switching Circuit and is performed with switching operation by FET Q1. By the switching operation in the primary side circuit, +42 VDC is generated and stabilized in the secondary side. The +42VDC generated at the secondary side is converted to more stabilized +5VDC by the chopping regulator IC located at the secondary side.

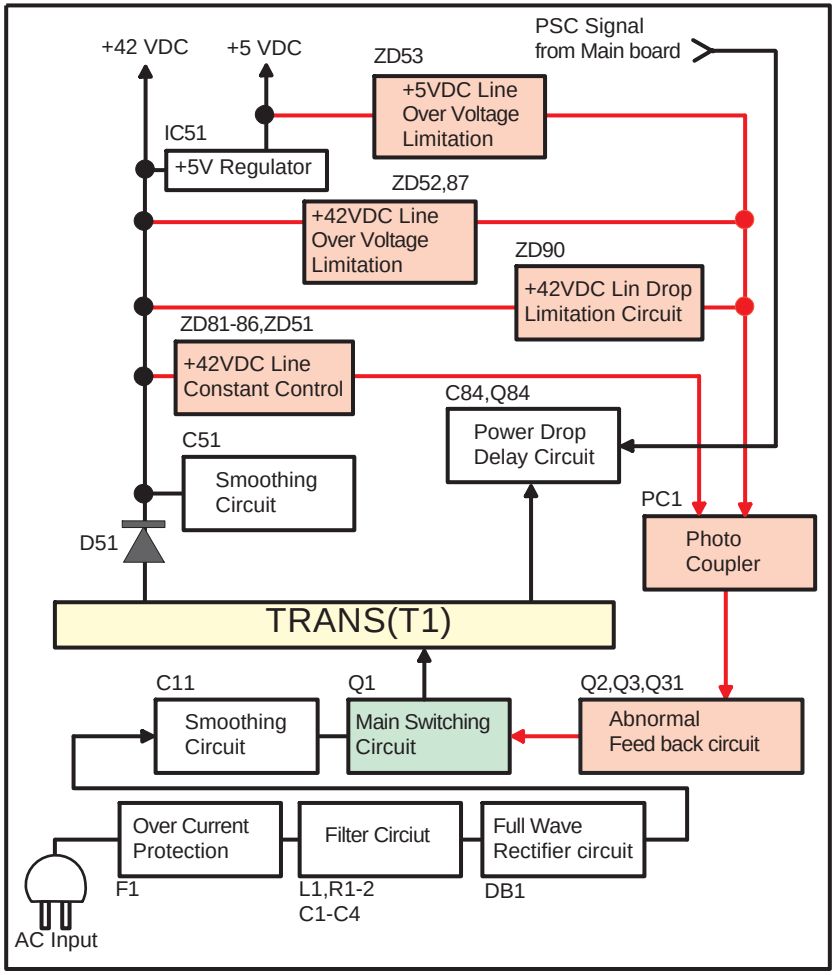

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Figure 2-3. Power Supply Circuit Block Diagram

- +42V Line Constant Voltage Control Circuit:
  The output level of the +42V line is monitored by a detection circuit consisting of seven Zener diodes.This circuit prevents from dropping for constant output voltage.
- +5V Line Over Voltage Protection Circuit:
  This protection circuit is in the same line as +42V over voltage protection circuit is located. The output voltage level of the +5V line is monitored by a Zener diode. This circuit shuts down the circuit operation forcefully when the voltage level exceeds +9V.
- +42VDC Line Drop Limitation Circuit:
  This protection circuit is in the same line as +42V over voltage protection circuit is located. The output voltage level of the +42V line is monitored by a Zener diode. This circuit shuts down the circuit operation forcefully when the voltage levels drops +36V.
- +42VDC Line Over Voltage Circuit:
  This circuit is in the same line as +5V line over voltage protection circuit is installed. The output level is monitored by two Zener diodes. If the voltage level exceeds +48VDC, this circuit stops circuit operation forcefully.
- +5V Line Constant Voltage/Constant Current Control Circuit:
  The output current is monitored by a +5VDC generation switching control IC(IC51), which also monitors the output voltage. This information is input to the internal comparator and stabilizes +5V line.

2.2.2 C259 Main Control Circuit

Printer mechanism is controlled by C259 main board. The figure below shows the block diagram of C259 main control circuit.

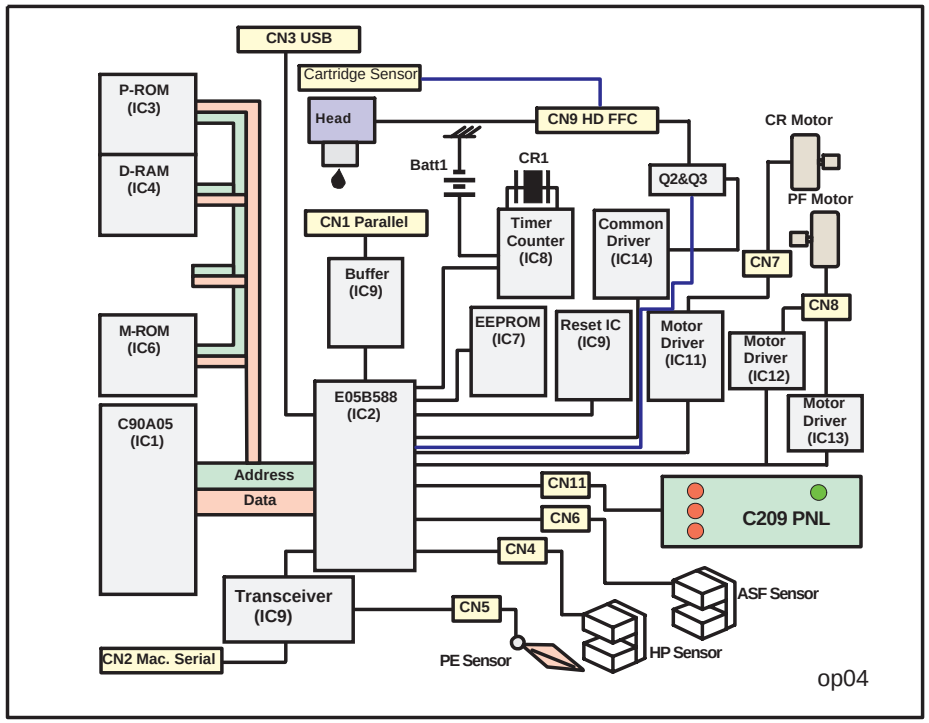


Figure 2-4. Control Circuit Block Diagram

2.2.2.1 Major Elements

Major elements used in C259 main control circuit board are below.

Table 2-2. Major Elements

IC	Location	Function
CPU C90A05CA	IC1	16bit CPU mounted on the control circuit board is driven by 24MHz clock frequency, and controls the whole printer.
Gate Array E05B58**	IC2	• Motor control • Head voltage control • EEPROM control • Monitoring the sensor • Monitoring Timer IC • Mac,Serial I/F, running direction parallel I/F, USB I/F control
PROM	IC3	Volume 4/8/16MB, Bus width 16 bit EEPROM • Program or program +CG(k character generator)
RAM	IC4	Bus width 16 bit, 4Mbit DRAM
Mask ROM	IC6	64Mbit Mask ROM • CG
AT93C46	IC7	1kBit EEPROM • Default Setting Value • Back-up of various parameter
RTC-9810SA	IC8	Reset/Timer IC
74VHC161284 MEA	IC9	Transceiver IC
SN75LBC777	IC10	RS-422/423 Transceiver
LB1847	IC11	CR motor drive iC
A3956ALB	IC12,13	PF/PUMP Motor drive IC
CXA2099S	IC14	Head drive control HIC • Generating head common voltage

2.2.2.2 Reset Circuit

Reset circuit consists of reset/timer IC(IC8) and peripheral elements. The reset/timer IC prevents the CPU from running away, which is caused by the unstable voltage(+5VDC line voltage is less than +4.3V) in the logic line during the power ON/OFF operation. Also, IC sends the reset signal to the CPU and gate array when +42VDC line voltage is less than +35.5V.

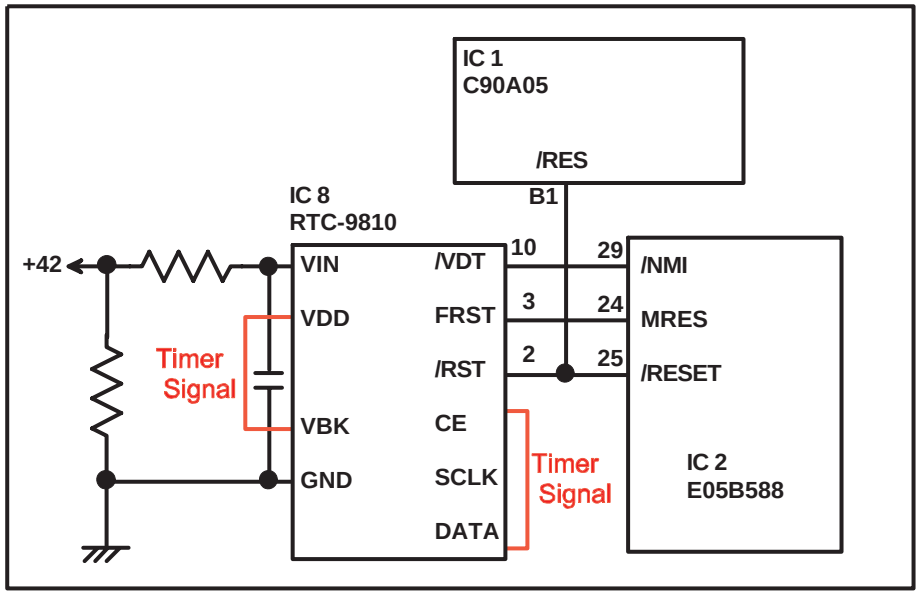


Figure 2-5. Reset Circuit

2.2.2.3 Sensor Circuit

The following sensor circuits are mounted on the C259 Main Control Circuit.

- HP Sensor
  HP sensor uses the photo interrupter method. A HP sensor detects the carriage home position. It is used for managing printing position and cleaning, etc.
- PE Sensor
  PE sensor uses the photo interrupter method. A PE sensor determines if there is a paper in the printer. Based on the signal from this sensor, a particular page edge treatment such as Micro-weave printing is performed.
- ASF Sensor
  ASF sensor uses the photo interrupter method. An ASF sensor detects the position of return lever when the power is turned on, and causes the paper to be picked up by the pick up roller fro the normal initial position.
- Thermistor Sensor (TH)
  This sensor is mounted on the print head board and measures the temperature around the head. It keeps stable printing quality, changing PZT drive voltage(VH) slightly according to changes of environmental temperature.
- Black/Color Cartridge Sensor(COB/COC)
  Cartridge sensor uses the mechanical method. The sensor detects if the cartridge is installed or not.

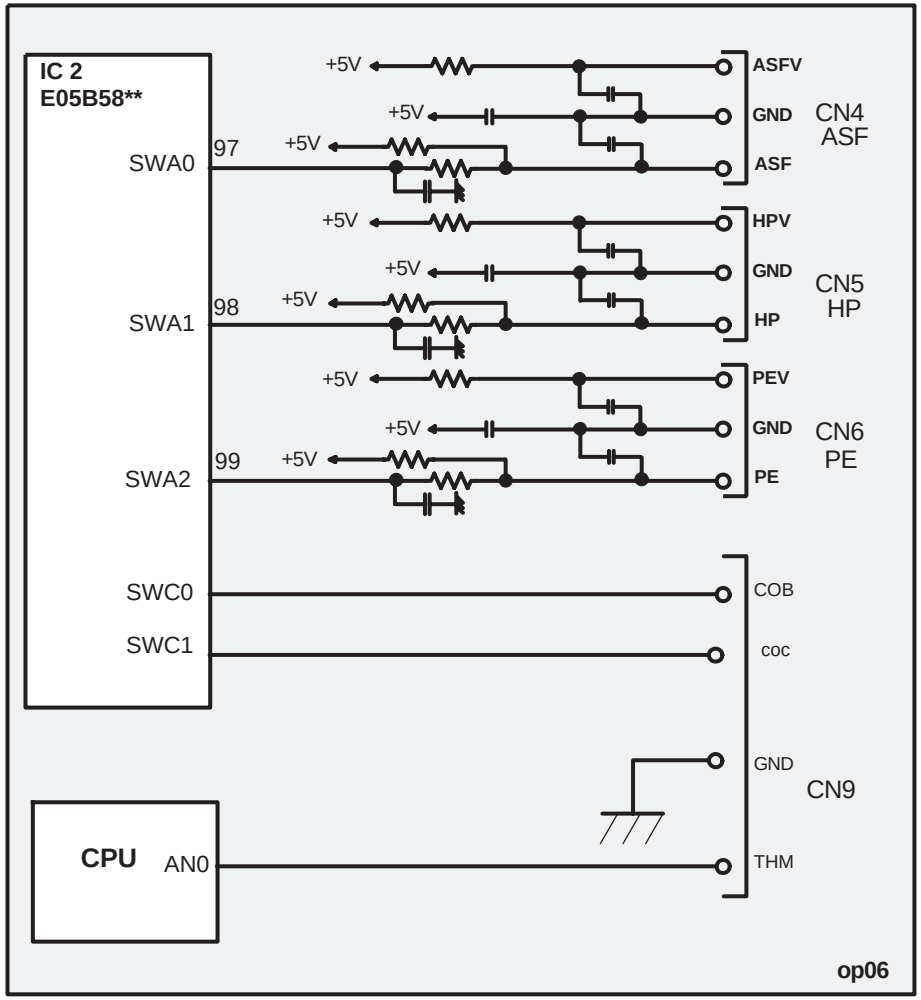


Figure 2-6. Sensor Circuit

2.2.2.4 Timer Circuit

The timer of this printer uses reset/timer IC(IC8). The timer keeps record of how long the printer is OFF and uses it information to judge it the initial cleaning should be performed or not when the power it turned ON next time. The data in the IC is backed up by the lithium battery.

2.2.2.5 EEPROM Control Circuit

This printer uses non-volatile memory EEPROM(IC7). When turning the power ON, EEPROM outputs data to the gate array(IC2) and records the data when turning the power OFF. The data which EEPROM will record are followings;

- Ink Consumption Counter (black/color)
- Frequency of Cleaning
- Destination Data
- CPSI Pass Word
- Other various setting values

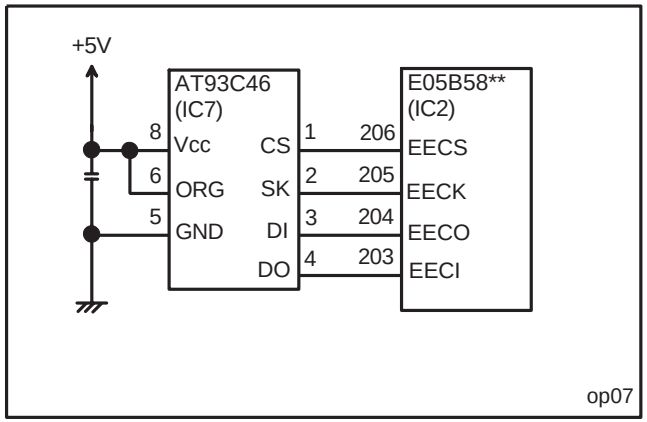


Figure 2-7. EEPROM Control Circuit

2.2.2.6 Head Drive Circuit

Head drive circuit of this printer consists of the following circuits.

- ☐ Driven voltage wave form circuit
  This circuit consists of HIC(IC14) and terminal transistor, and generates drive wave which will be charged to each PZT.

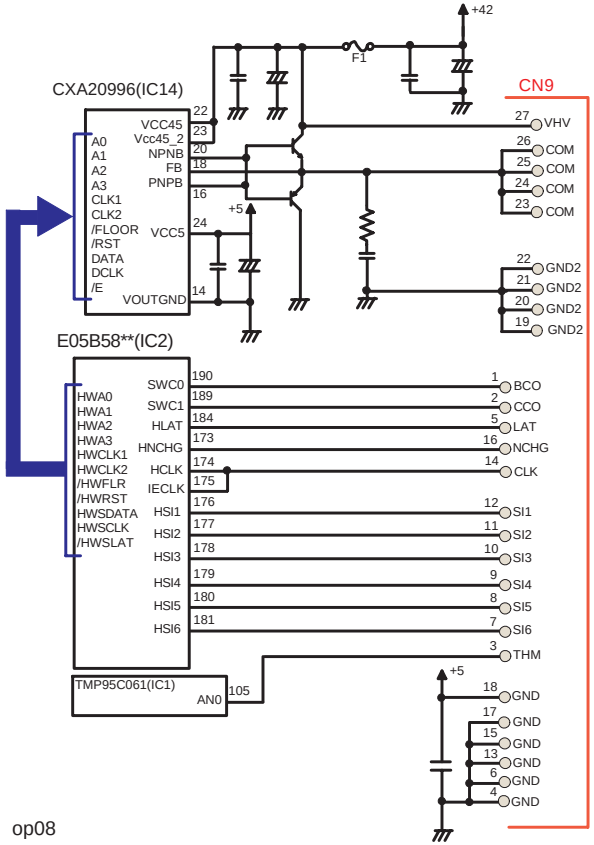


Figure 2-8. Common Drive Circuit

- Driver on the head
  The driver on the head is Nozzle-selector drive circuit. Each drive waveform generated in the drive voltage wave form circuit is charged to the selected nozzle by this circuit with PZT elements, then, printing is performed.

2.2.2.7 Paper Feed (Pump) Motor (PF/Pump Motor) Drive Circuit

IC12 and IC13 on the control circuit board drive PF/PUMP motor. This motor uses 4-phase 200-pole Hybrid type stepping motor and drives constant current bi-pola.

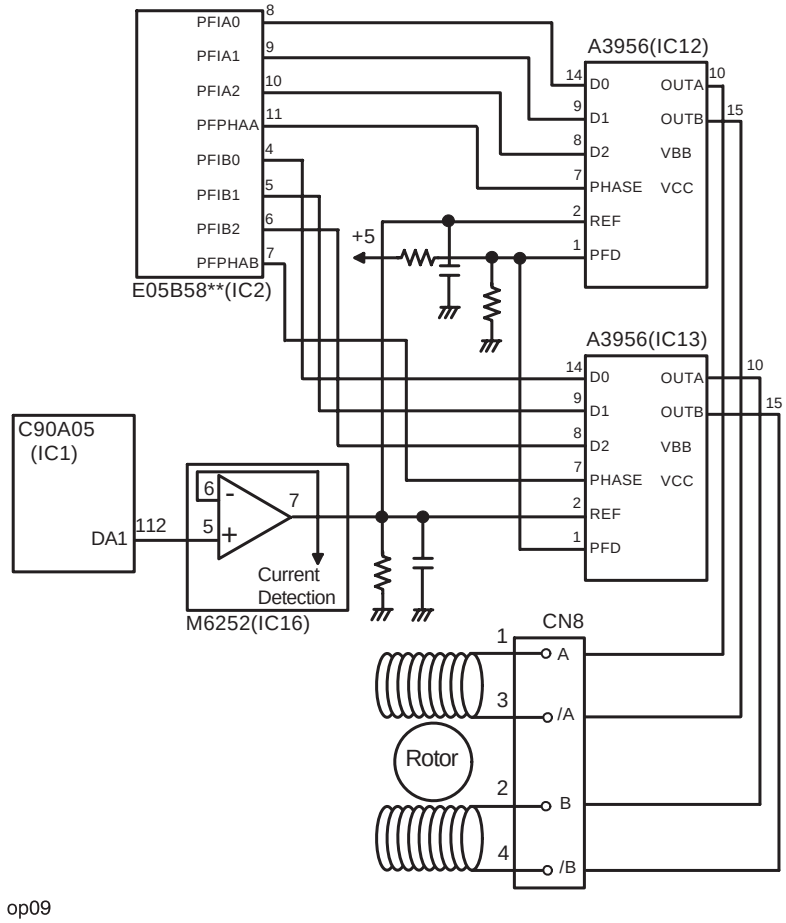


Figure 2-9. Paper Feed (Pump) Motor Drive Circuit

2.2.2.8 Carriage Motor(CR Motor) Drive Circuit

CR motor is driven by IC11 mounted on the C259 main control board. 4-phase 200-pole Hybrid type stepping motor is used as a CR Motor and is driven by bi-pola constant drive control.

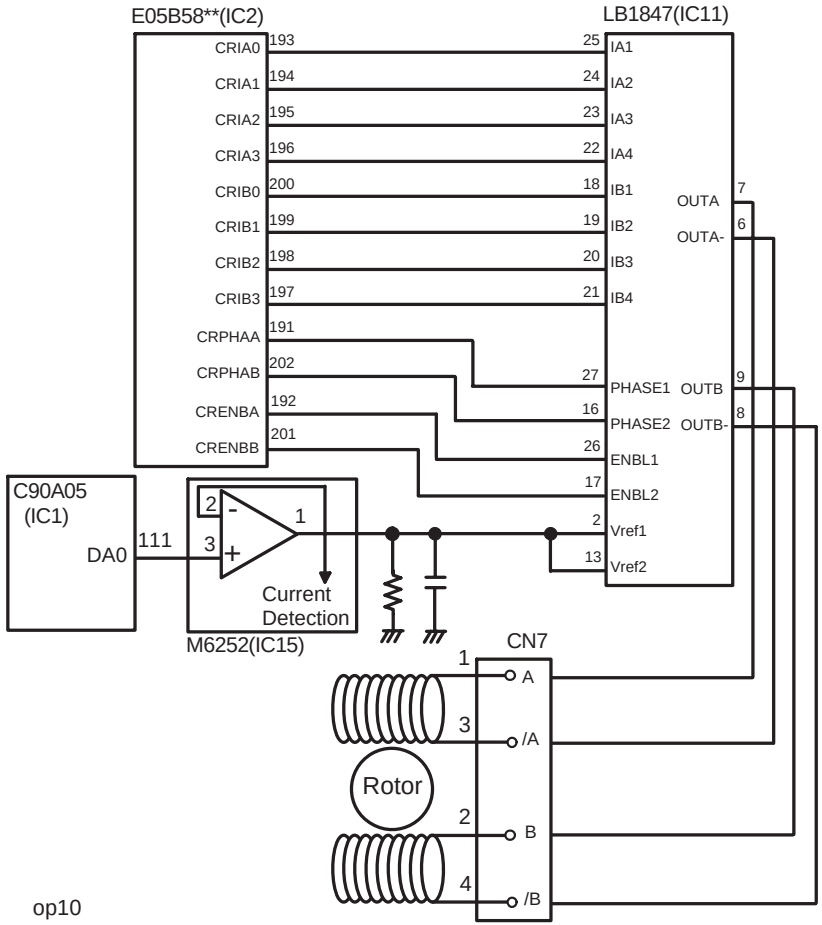


Figure 2-10. Carriage Motor Drive Circuit

& + $ 3 7 (5

3

TROUBLESHOOTING

3.1 Overview

This section describes how to identify and troubleshoot the problems when repairing the printer by dividing the troubles into two levels; repair and replacement of the assemblies and units, and repair of the components. Refer to the flowchart below and perform repairing the component after separating the defective units.

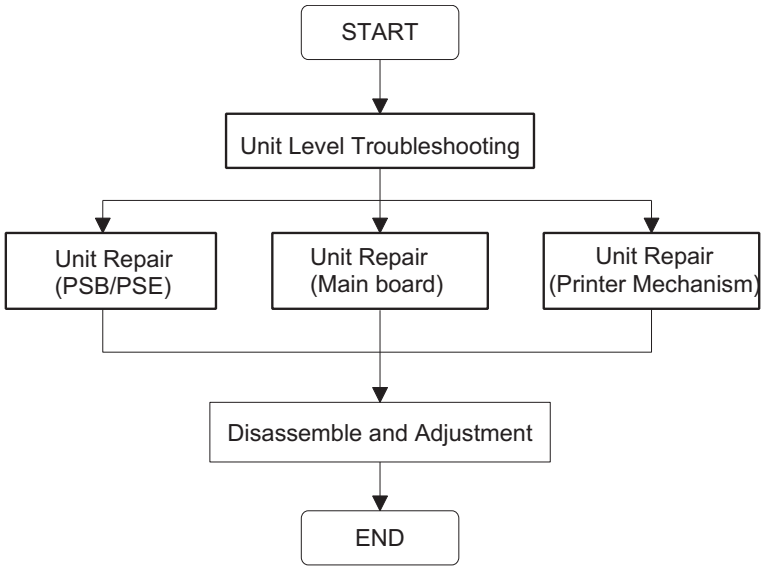


Figure 3-1. Troubleshooting Flowchart

Table 3-1. Motor, Coil Resistance

Motor	Location	Check Point	Resistance
CR Motor	CN7	Pin 1 and 3 Pin 2 and 4	7.8 Ohms ± 10% (at 25 °C/one phase)
PF Motor	CN8	Pin 1 and 3 Pin 2 and 4	8.8 Ohms ±10% (at 25 °C/one phase)

Table 3-2. Sensor Check Point

Sensor Name	Check Point	Signal Level	Switch Mode
HP Sensor	CN4/Pin 1 and 2	Less than 0.7V	Open (Out of HP range)
		More than 2.4V	Close (Within HP range)
PE Sensor	CN5/Pin 1 and 2	Less than 0.7V	Open (Paper exists)
		More than 2.4V	Close (No paper)
ASF Sensor	CN6/ Pin 1 and 2	Less than 0.7V	Open (Paper Feed Roller home position)
		More than 2.4V	Close (Out of home position)
Thermistor (THM)	Head side CN9/ Pin 3 and 4	Analog signal	10 K (at 24 °C)
Black cartridge sensor (COB)	Head side CN9/ Pin 1 and 4	Open (Cartridge is installed)	
		Close (No Cartridge)	
Color cartridge sensor (COC)	Head side CN9/ Pin 2 and 4	Open (Cartridge is installed)	
		Close (No Cartridge)	

Table 3-3. Error Indication

Condition	LED Indication				Remedy
	Power	Paper Check	Ink End (Black)	Ink End (Color)	
No Paper	--	On	--	--	Set papers
Paper Jam	--	Blink	Off	Off	Removed the jammed paper
Ink End / No Cartridge (black)	--	--	On	--	Close the cartridge cover correctly or replace the ink cartridge with new one.
Ink End / No Cartridge (color)	--	--	--	On	Close the cartridge cover correctly or replace the ink cartridge with new one.
Ink Low (black)	--	--	Blink	--	Replace with a new ink cartridge.
Ink Low (color)	--	--	--	Blink	Replace with a new ink cartridge.
Maintenance Request	Blink	Blink	Blink	Blink	Replace the waste ink pad and reset EEPROM and Timer IC. (See“Special Setting Mode” on page -22)
Fatal Error	Blink	Blink	On	On	Turn Off and back On the printer. If it does not recover, repair the related units.

3.2 Unit Level Troubleshooting

This section contains the flow charts which are used to isolate the faulty unit by following the flow chart according to the problem caused during replacing or repairing the unit. You are to identify the faulty unit based on the primary symptom listed in the Table3-4. After this, refer to 3.4 Unit Repair and find and replace the defective parts.

Table 3-4. Symptoms and Corresponding Flow Chart

Symptom	Cause	Flow Chart
Printer does not operate.	• No LED goes ON. • Printer mechanism does not operate at all.	1
Error is detected.	• LED indicates error.	2
Abnormal printing operation.	• Printing is not performed. • Bad printing quality. • Abnormal printing.	3
Paper Feeding is not performed correctly.	• Abnormal paper feeding. • Paper jam occurs. • Page heading position is not right.	4
Abnormal Control Panel	No responds from the printer, even after pressing switches.	5

1. Printer does not operate.

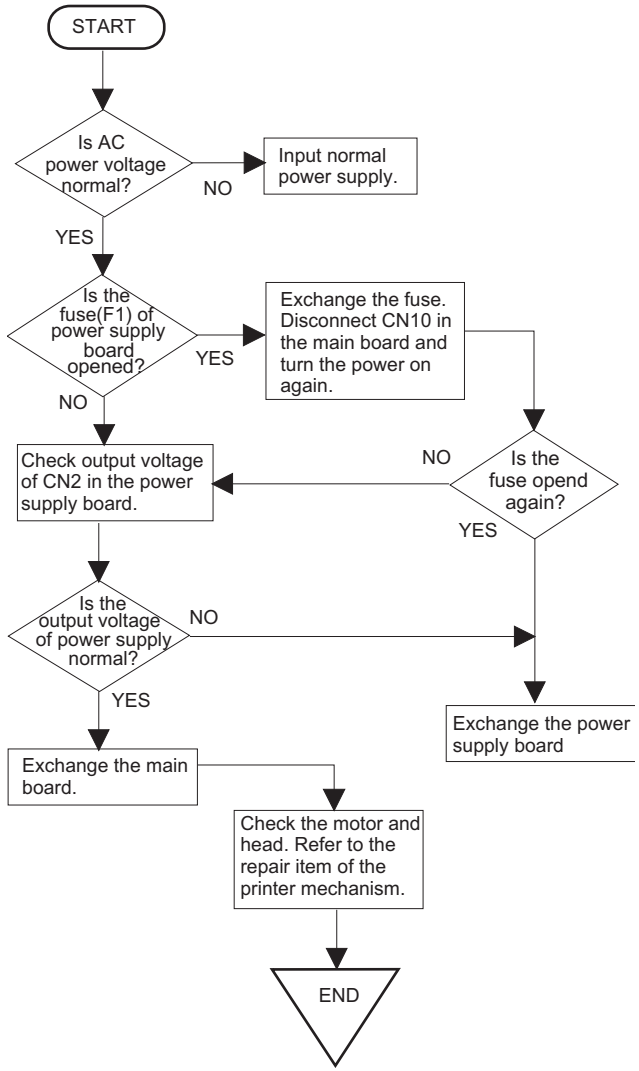

START
Is AC power voltage normal?
NO
Input normal power supply.
YES
Is the fuse(F1) of power supply board opened?
YES
Exchange the fuse. Disconnect CN10 in the main board and turn the power on again.
NO
Check output voltage of CN2 in the power supply board.
NO
Is the fuse opend again?
YES
Is the output voltage of power supply normal?
NO
YES
Exchange the power supply board
Exchange the main board.
Check the motor and head. Refer to the repair item of the printer mechanism.
END

Figure 3-2. Flowchart 1

2. Error is detected.

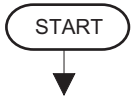


Figure 3-3. Flowchart 2

3. Abnormal printing operation

Figure 3-4. Flowchart 3

4. Paper feed operation is not performed correctly

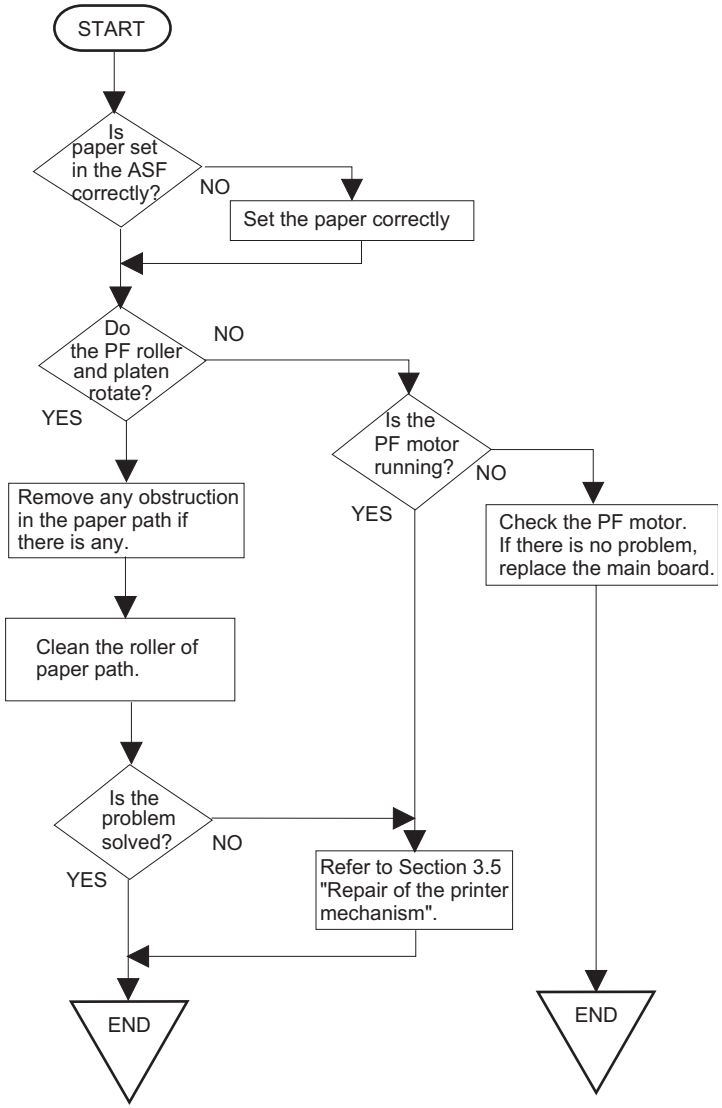

START
Is paper set in the ASF correctly?
NO
Set the paper correctly
Do the PF roller and platen rotate?
NO
YES
Is the PF motor running?
NO
YES
Remove any obstruction in the paper path if there is any.
Check the PF motor. If there is no problem, replace the main board.
Clean the roller of paper path.
Is the problem solved?
NO
YES
Refer to Section 3.5 "Repair of the printer mechanism".
END
END

Figure 3-5. Flowchart 4

5. Abnormal Control Panel

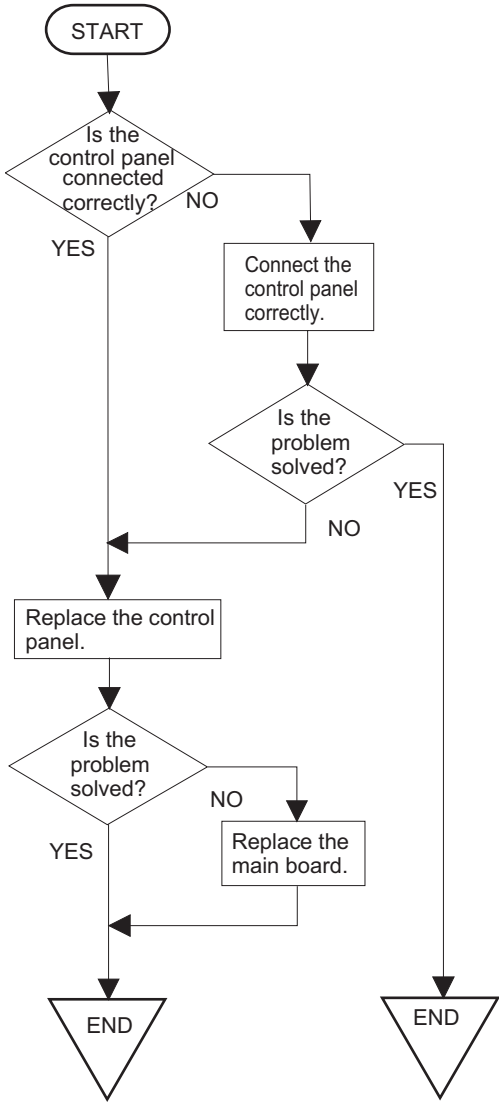


Figure 3-6. Flowchart 5

3.3 Unit Repair (Power Supply Board)

This section describes the problems related to the power supply board. The table below provides various symptoms, likely causes, and checkpoints. The checkpoints refer to waveforms, resistance, and other values to check to evaluate the operation of each component.

Table 3-5. Repair of the Power Supply Board

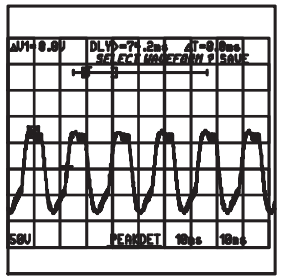
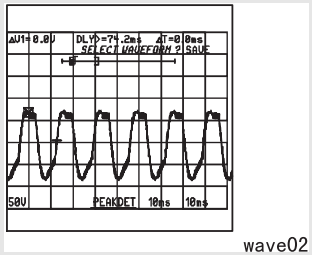
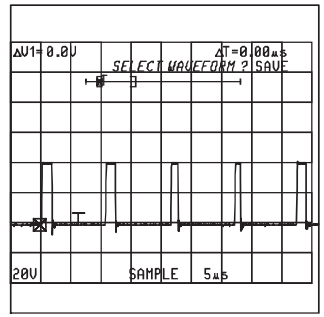
Symptom	Condition	Cause	Check point	Solution
The printer does not operate at all.	+42VDC line does not work.	F1 is open.	Check F1 is normal or not by using a multimeter.	Replace F1.
		Trans T1 is open.	Check T1 is normal or not by using a multimeter.	Replace T1.
		FET(Q1) is broken.	Check the drain wave.  wave01	Replace Q1.
		Q2 or Q3 is broken.	Check the collector wave.  wave02	Replace Q2 or Q3.
		PC1 is broken.		Replace PC1.

Table 3-6. Repair of the Power Supply Board

Symptom	Condition	Cause	Check point	Solution
The printer does not operate at all.	+5VDC line does not work.	IC51(FA3635A) is broken.	Check the output wave(pin 8).  wave03	Replace IC51.

3.4 Repair of the Control Board

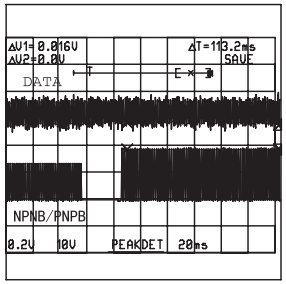
This section describes the problems related to the power supply board. The table below provides various symptoms, likely causes, and checkpoints. The checkpoints refer to waveforms, resistance, and other values to check to evaluate the operation of each component.

Table 3-7. Repair of the Control Board

Symptom	Condition	Cause	Check point	Solution
			Check +5VDC line(Pin 7 of IC8) and reset signal (Pin 2 of IC8).	
		Reset circuit is broken.		Replace IC8.
The printer does not operate at all.	CPU does not work.	ROM is not selected correctly.	Check that the waveform of Pin 11 of IC3 reverses High/Low.	Replace T1.
		RAM is broken.		Replace Q1.
		CPU is broken.	Check the signal waveform Pin 88 of IC1.	

Table 3-8. Repair of the Control Board

Table 3-9. Repair of the Control Board

Symptom	Condition	Cause	Check point	Solution
Abnormal printing		IC12 is broken.	Check the signal waveform of DATA(Pin 29) of IC14 and Common NPNB/PNPB(Pin 16/19).  wave08	If DATA is not input, replace IC2.
		IC14 is broken.		Replace IC14.

3.5 Unit Repair (Printer Mechanism)

This section provides instruction for repairing mechanism. It describes various problems, symptom, likely causes, checkpoints, and solutions. Select appropriate symptom from the the table and check each parts and its function as describes in the checkpoint.

Table 3-10. Repair of the Printer Mechanism

Symptom	Condition	Cause	Check Point	Solution
Abnormal Pump Mechanism	Abnormal PF motor operation when the power is turned on.	Foreign substances are loaded in the PF gears.	Manually drive the PF drive gear and check if it rotates normally.	Remove any foreign objects.
		The PF motor is defective.	Check the inner coil resistance and see if there is any disconnection of the coil. (see Table 3-1, “Motor, Coil Resistance,” on page 39)	Exchange the PF motor.
Defective pump absorption.	Used ink does not drain to the waste ink pad.	The pump tube is crashed.	Check the tube visually.	Exchange the tube.
		The cap is damaged or deformed.	Check the tube visually.	Change the cap mechanism.

Table 3-11. Repair of the Printer Mechanism

Symptom	Condition	Cause	Check Point	Solution
Abnormal carriage operation.	Carriage operation is abnormal when tuning on the power.	Foreign substances are loaded in the CR drive gears.	Check visually if there is any substances or not.	Remove any foreign objects.
		The CR motor is defective.	Check the inner coil resistance and see if there is any disconnection of the coil. (Table 3-1, “Motor, Coil Resistance,” on page 39)	Exchange the CR motor.
	Carriage operation is abnormal during the printing operation.	Carriage movement is not smooth.	Manually move the carriage and check if it moves smoothly.	Exchange the tube.
			Check the tension of the timing belt.	Repair the tension mechanism or replace it.
			Check if there is any foreign substances on the carriage path.	Remove any foreign objects.

Table 3-12. Repair of the Printing Mechanism

Symptom	Condition	Cause	Check Point	Solution
Printing is not performed.	Carriage moves but no printing is performed.	Head FFC is out of connection.	Check visually if the head FFC on the board or carriage is connected firmly.	Connect FFC properly.
		FFC is disconnected inside.	Check the FFC by using a tester.	Replace the FFC.
		I/C is defective.	Install new I/C and perform the self-test.	Replace I/C.
		Head Unit is defective.	If the condition does not improve even after 2 or 3 times of cleaning operation, replace the head unit and perform the self-test.	Replace the head unit.
Abnormal printing	Only a particular dot causes abnormal printing.	Print head surface is not clean.	Check the printing quality after performing the cleaning several times.	Perform cleaning.
		Head unit is defective.	Check the printing quality after performing the cleaning several times.	Replace the head, if the print quality does not recover.
		Absorber in the cap is touching the head surface.	Visually check the condition of the head absorber.	Replace the absorber in the cap if it is deformed.

Table 3-13. Repair of the Printing Mechanism

Symptom	Condition	Cause	Check Point	Solution
Abnormal Printing	Sometime printing is not performed.	Print head surface is not clean.	Perform cleaning several times and check the print quality.	Perform cleaning.
		FFC is disconnected inside.	Check the FFC by using a tester.	Replace the head FFC.
		Head FFC is out of connection.	Install new I/C and perform the self-test.	Connect Head FFC firmly.
		Head Unit is defective.	If the condition does not improve even after 2 or 3 times of cleaning operation, replace the head unit and perform the self-test.	Replace the head unit, if it does not recover after performing cleaning.
		I/C is defective.	Install the new I/C and perform self-test.	Replace I/C.
	Black specks or dots.	The head FFC is out of connection.	Check if the head FFC on the board or carriage is connected surely.	Connect FFC properly.
		The head unit is defective.	Check connection with the head FFC.	Replace the head if there is no connection problem with the FFC.

Table 3-14. Repair of the Printer Mechanism

Symptom	Condition	Cause	Check Point	Solution
Abnormal Printing.	A vertical line is not aligned.	Bi-directional alignment is not adjusted.	Perform Bi-D adjustment.	Refer to Chapter 5 “Adjustment”.
	White line appears in the imaged data.	Head angle is not correct.	Perform head angle adjustment.	Refer to Chapter 5 “Adjustment”.
		Platen gap is not right.	Perform Platen Gap adjustment.	Refer to Chapter 5 “Adjustment”.
		Dot shooting direction is tilted because head surface is not clean.	Perform cleaning several times and check the print quality.	Perform the cleaning operation.
		I/C is defective.	Install the new I/C and perform self-test.	Replace I/C.
		Head unit is defective.	Head unit is broken.	Replace the head unit.
Abnormal Paper Feeding.	Paper is not fed.	Friction of the PF roller.	Check if the PF roller rotates when paper is not fed.	Clean the PF roller by the cleaning sheet. Replace the PF roller if it does not recover.
		Abnormal operation of the hopper.	Check the movement of the ASF hopper visually.	Replace the ASF.

Table 3-15. Repair of the Printer Mechanism

Symptom	Condition	Cause	Check Point	Solution
Abnormal Paper Feeding.	Paper is not fed.	Malfunction of ASF drive change-over.	Check if the ASF gear rotates visually.	Replace the gears of the ASF drive change-over.
	Page heading position is wrong.	Friction of the PF roller.	Check if the PF roller slips during the paper feeding.	Clean the PF roller by the cleaning sheet. Replace the PF roller if it does not recover.
Printer stops during initialization.	Fatal error appears.	ASF sensor is defective.	Check the signal level of the ASF sensor.	Replace ASF sensor.
		PE sensor is defective.	Check the signal level of the PE sensor.	Replace PE sensor.
		HP sensor is defective.	Check the signal level of the HP sensor.	
		Head FFC is disconnected.	Check if the head FFC is connected.	Connect the head FFC.
		CR motor is defective.	Check the CR motor cable is connected.	Replace the CR motor if there is no problem in the cable connection.
		PF motor is defective.	Check if the PF motor cable is connected.	Replace the PF motor if there is no problem in the cable connection.

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7

DISASSEMBLY AND ASSEMBLY

4.1 Overview

This section describes procedures for disassembling the main components of EPSON Stylus Photo750. Unless otherwise specified, disassembly units or components can be reassembled by reversing the disassembly procedure. Precautions for any disassembly or assembly procedures are described under the heading “Caution”. Any adjustment required after disassembling the units are described under the heading “Required Adjustment”. Also, read precautions below before starting.

4.1.1 Precautions

A lithium battery is installed on the main board of this printer for backing up the system clock. Mishandling the battery may cause explosion or short. Read carefully the following precautions.

WARNING

- **Disconnect the power cable before disassembling or assembling.**
- **A lithium battery is installed on the main board of this printer. Be sure to observe the following instructions when servicing the battery:**

1. **Do not get the battery shorted.**
2. **Do not install the battery in the wrong direction.**
3. **Do not heat the battery or put it near the fire.**

CAUTION

Danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacture. Dispose of used batteried according to government laws and regulations.

CAUTION

Risque d’explosion si la pile est remplacée incorrectment. Ne remplacer que par une pile du même type ou d’un type équivalent recommandé par le fabricant. Eliminer les piles déchargées selon les lois et les règles de sécurité en vigueur.

CAUTION

- **Since the fan inside of the printer interior does not have a cover, do not touch it when it is running.**
- **Handle with care for the electric parts inside of the printer, since electrostatic may damage the elements.**

4.1.2 Tools

Use only specified tools to avoid damaging the printer.

Table 4-1. Tools

Name	Supplier	Parts No.
Phillips Screw Driver (No.1)	EPSON	B743800200
Phillips Screw Driver (No.2)	EPSON	B743800400
Nipper	EPSON	B740500100
Tweezers	EPSON	B741000100
Thickness gage	EPSON	B776702201

4.1.3 Work Completion Check

If any service is made to the printer, use the checklist shown below, to confirm that all works are completed properly and the printer is ready to return to the user.

Table 4-2. Check List

Classifi-cation	Item	Check Point	Status
Main Unit	Self-test	Is the operation normal?	☐ Checked ☐ Not necessary
	On-line test	Is the printing successful?	☐ Checked ☐ Not necessary
	Print head	Is ink discharged normally from all nozzle?	☐ Checked ☐ Not necessary
	Carriage Mechanism	Does it move smoothly?	☐ Checked ☐ Not necessary
		Is there any abnormal noise in its operation?	☐ Checked ☐ Not necessary
		Is there any dirt or foreign objects on the CR guide shaft?	☐ Checked ☐ Not necessary
		Is the CR motor at the correct temperature? (Not too hot?)	☐ Checked ☐ Not necessary
	Paper Feeding Mechanism	Is paper advanced smoothly? • No paper jamming? • No paper skew? • No multiple feeding? • No abnormal noise?	☐ Checked ☐ Not necessary
		Is the PF Motor at correct temperature?	☐ Checked ☐ Not necessary
		Is the paper path free of all obstructions?	☐ Checked ☐ Not necessary

Table 4-3. Check List

Classifi-cation	Item	Check Point	Status
Adjustment	Specified Adjustment	Are all the adjustment done correctly?	☐ Checked ☐ Not necessary
Lubrication	Lubrication	Are all the lubrication made at the specified points?	☐ Checked ☐ Not necessary
		Is the amount of lubrication made correctly?	☐ Checked ☐ Not necessary
Function	ROM version	Version:	☐ Checked ☐ Not necessary
Packing	Ink Cartridge	Are the ink cartridge installed correctly?	☐ Checked ☐ Not necessary
	Protective materials	Have all relevant protective materials been attached to the printer?	☐ Checked ☐ Not necessary
Other	Attachment, Accessories	Have all relevant items been included in the package?	☐ Checked ☐ Not necessary

4.2 Disassembly

The flowchart below shows step-by step disassembly procedures.

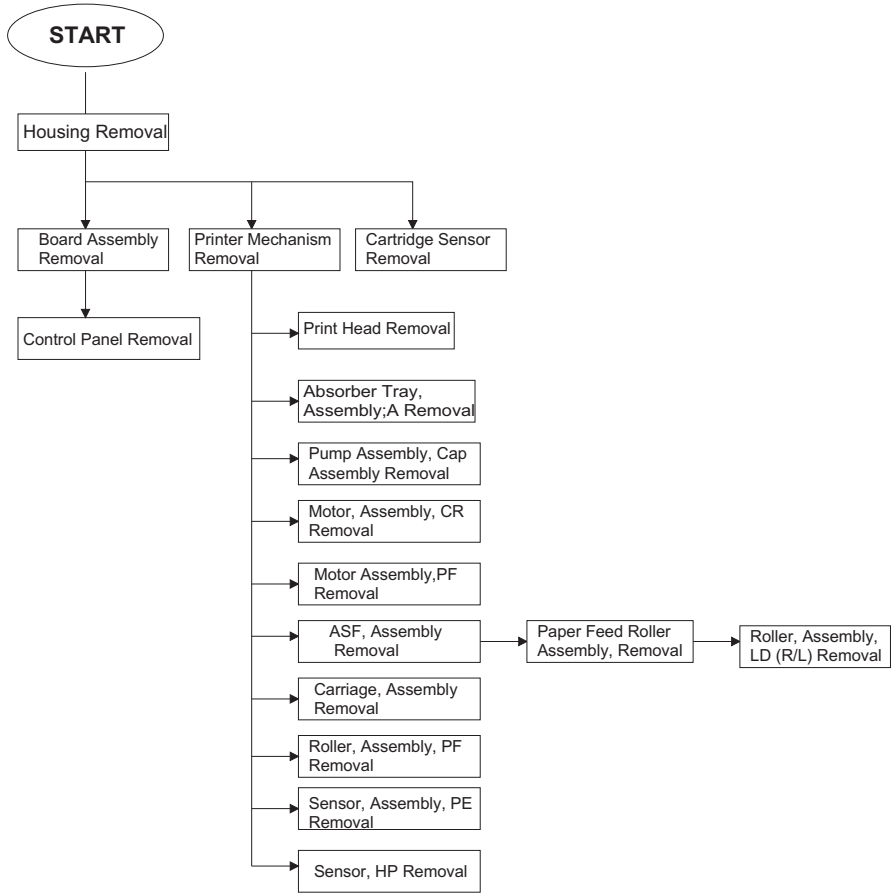

Figure 4-1. Flowchart

4.2.1 Housing Removal

Since this printer has no lower housing, the printer mechanism is exposed just by removing the upper housing.

1. Open the printer cover and set the PG adjust lever on the right-hand side to (+) position.
2. Remove 4 screws and remove the upper housing.

CHECK POINT

Pull the front edge of the upper housing while lifting up the upper housing to remove it.

CAUTION

Be careful not to pinch the cable with the posts of the upper housing when reinstalling it.

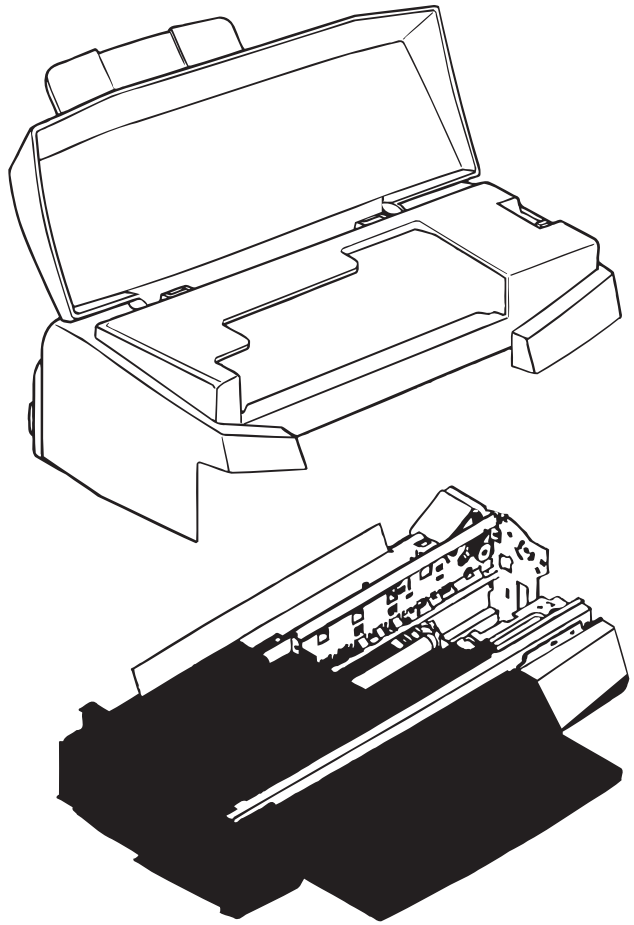

Figure 4-2. Housing Removal

4.2.2 Circuit Boards Removal

Refer to “Check Point” and “Adjustment Required” on the next page.

1. Remove the upper housing. (“Housing Removal” on page -54)
2. Remove 5 screws securing the “Printer Mechanism” to the “Shield plate, M/B”.

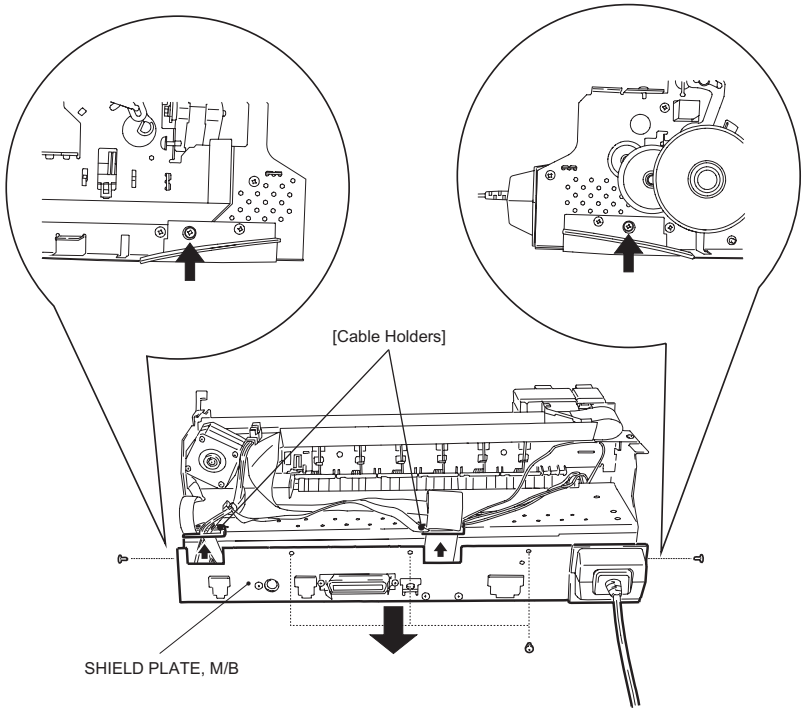

Figure 4-3. Shield Plate, M/B Removal

3. Slightly pull out the “Shield Plate, M/B” and remove the cable holder installed on the “Shield Plate, M/B”.
4. Disconnect all the cables from the connectors on the C259 main board.
5. Fully separate “Shield Plate, M/B” from the printer mechanism.
6. When removing each board unit from “Shield Plate, M/B”, remove each screw securing the each board (C259Main: 10 screws, C257PSB: 4 screws), and remove each board.

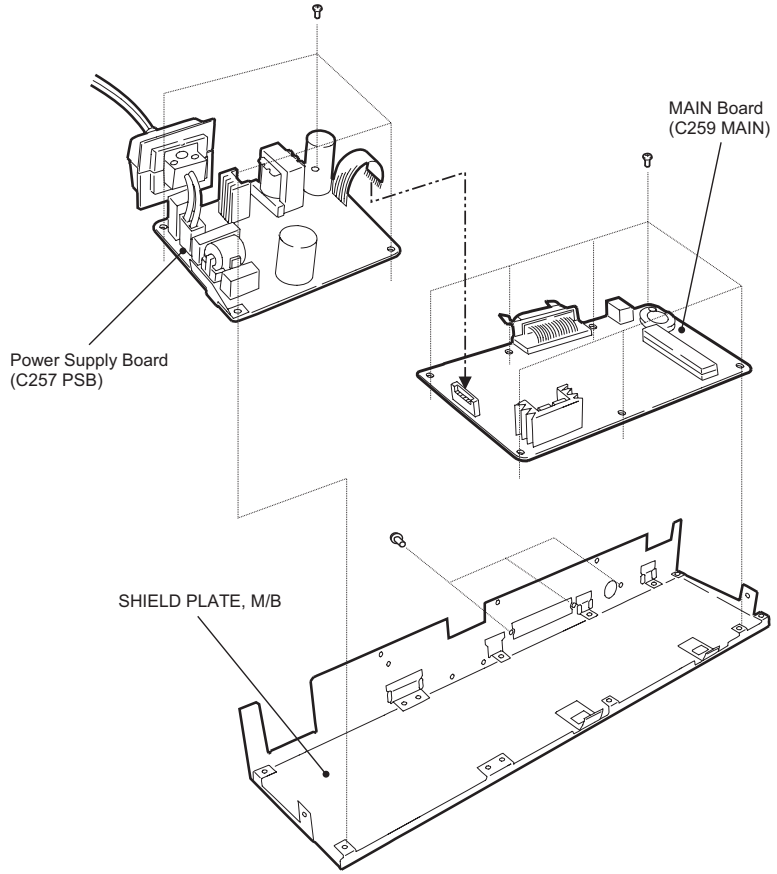

Figure 4-4. C259 Main Removal

NOTE: *When removing C257PSB, disconnect cables connected to the C259 main board.*

Unlock the connector CN6 and CN7 before disconnecting them. Also, be sure to lock them when reconnecting them.

After replacing C259 Main Board, perform the following adjustments.

1. **Head ID Writing (See “Head Voltage ID Adjustment” on page -83)**
2. **Head Angular Adjustment (See “Head Angular Adjustment” on page -84**
3. **Bi-D Adjustment (See “Bi-D Adjustment” on page -86)**

4.2.3 Control Panel Removal

1. Remove the upper housing.(See“Housing Removal” on page -54)
2. Remove 2 screws securing the control panel, then remove the control panel from the printer mechanism.
3. Remove one screw securing the “Housing, Panel, Left” to the printer mechanism.
4. Remove 2 screws securing the “Board, Assembly, Panel” to the printer mechanism, then remove C209PNL board from the “Panel, Assembly”.
5. Remove FFC from the connector on the C209PNL board.

CHECK POINT

By removing the control panel, the stacker assembly can be also detached from the printer mechanism, since it is held by the control panel assembly.

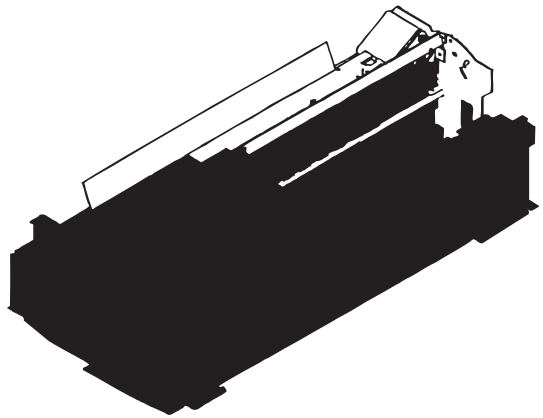

Figure 4-5. Control Panel Removal

4.2.4 Absorber Tray, Assembly;A Removal

1. Remove the upper housing.(See “Housing Removal” on page -54)
2. Remove the control panel. (See “Control Panel Removal” on page -57)
3. Remove one screw securing the “Absorber Tray, Assembly;A” to the right side of the printer mechanism.
4. Remove “Spacer Tray” securing “Absorber Tray, Assembly” at the left side of the printer mechanism and remove “Absorber Tray, Assembly;A” by pulling it downward.

CAUTION

Be sure to reset the waste ink counter, when replacing the “Absorber Tray, Assembly;A” or absorber(ink pad) inside. (See “Special Setting Mode” on page -22)

CHECK POINT

After installing the “Absorber Tray, Assembly;A”, be sure that 2 points of “Stopper Stacker” installed on the exit roller shaft are pushed back to the back of the rear side of protrusion of “Absorber Tray, Assembly;A”.

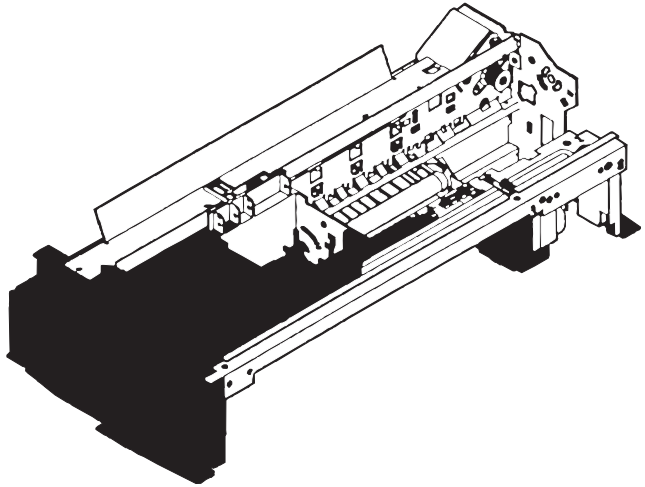

Figure 4-6. Absorber Tray, Assembly;A Removal

4.2.5 Printer Mechanism Removal

4.2.5.1 Print Head Removal

1. Remove the upper housing.(See “Housing Removal” on page -54)
2. Rotate “Gear, 67.2” toward the front side of the printer and release the carriage lock mechanism. Then, move the carriage assembly to the left side.
3. Remove black and color ink cartridges.
4. Remove “Cover, Cartridge, B” and “Cover, Cartridge, C” from the carriage assembly.
5. Remove the “Torsion Spring, 49” and one screw. Then, remove the “Fastner, Head”.
6. Remove the “Head FFC” installed to the carriage assembly, and remove the “Print Head Unit” form the carriage.
7. Remove the “Head FFC” from the connector on the driver board of print head unit.

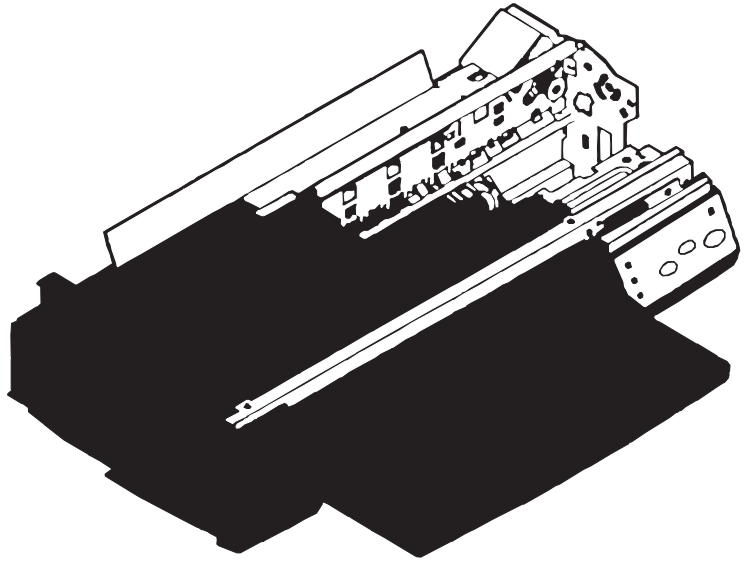

Figure 4-7. Print Head Removal

CHECK POINT

- **Be sure that the grounding plate is installed to the carriage correctly. (There are 2 fixing pins on the carriage.**
- **After installing the print head to the carriage, be**

Figure 4-8. Print Head Installation

4.2.5.2 Pump, Assembly/Cap, Assembly Removal

1. Remove the upper housing. (See “Housing Removal” on page -54)
2. Remove the control panel. (See “Control Panel Removal” on page -57)
3. Remove “Absorber Tray, Assembly;A” (See “Absorber Tray, Assembly;A Removal” on page -58)
4. Loosen 2 screws and disengage the “Frame, Assembly, Exit” and side frame.
5. Sand up the printer mechanism so that you can see the bottom of the printer mechanism.
6. Remove one hook securing the “Cap Assembly” at the right side of the frame, and release the engagement with the frame by lifting up the right side of “Cap Assembly”.
7. Pull out the “Cap Assembly” toward the bottom of the printer mechanism. (However, “Cap Assembly” is still connected to the “Pump Assembly” by the ink tube.)
8. Remove 2 screws securing the “Pump, Assembly” to the frame.
9. Release one hook securing “Pump Assembly” to the frame, and move the “Pump Assembly” to left and remove it.

CAUTION

- **Be careful not to damage the rubber part of the cap.**
- **When handling the “Cleaner, Head” installed at “Pump Assembly”, be careful for following points.**
  - Do not touch the “Cleaner, Head” by bare hand. Use globe and tweezers.
  - When installing “Cleaner, Head”, its black rubber side should face to the right side of the frame.

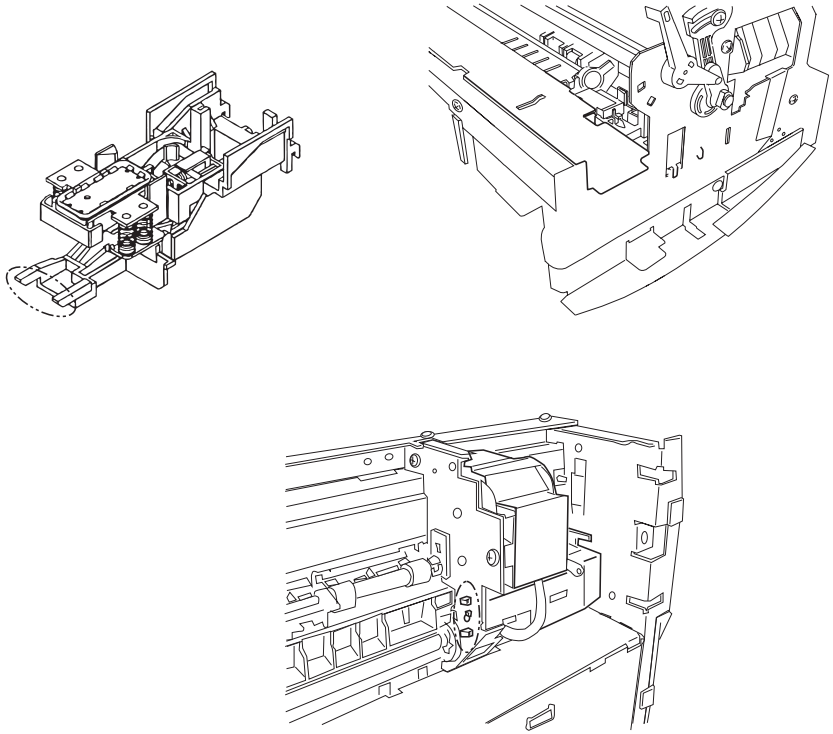

Figure 4-9. “Cap, Assembly” and “Pump Assembly” Removal

CHECK POINT

- **Since there is a spring inside the pump assembly, be careful of the spring popping out.**
- **When assembling, be careful not to pinch or give pressure to the ink tube, which is connected between “Pump, Assembly” and “Cap, Assembly”.**
- **After installing the “Pump, Assembly”, rotate the “Gear, 67.2” and check if the cleaner part moves back and forth. (At this time, hold the “Cap, Assembly” toward the right direction of the frame”)**

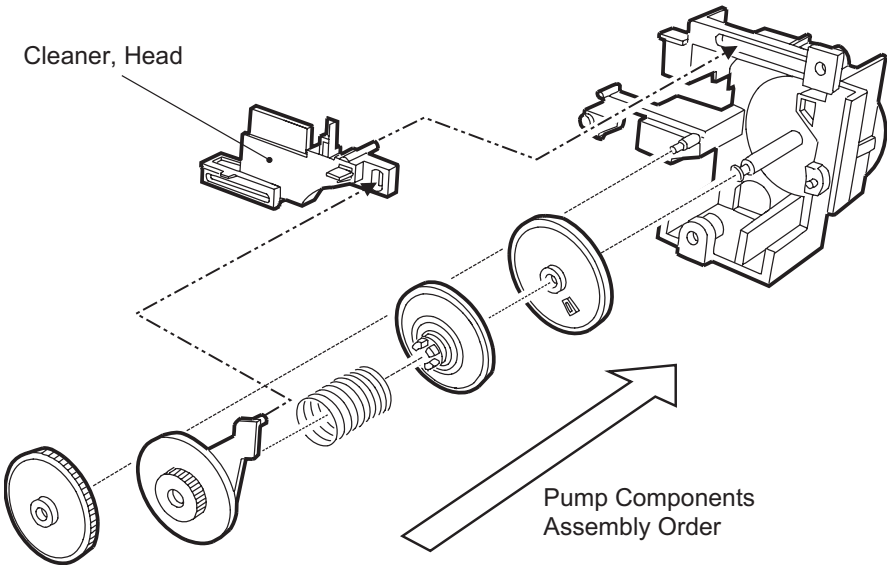

Figure 4-10. Component Parts of “Pump, Assembly”

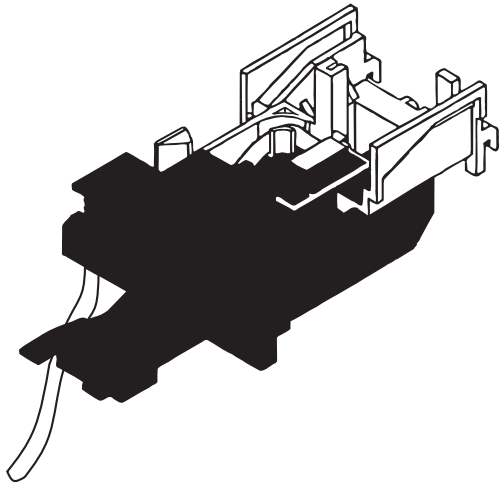

Figure 4-11. Ink Tube

4.2.5.3 Motor, Assembly, CR Removal

1. Remove the upper housing.(See “Housing Removal” on page -54)
2. Rotate “Gear, 67.2” toward the front of the printer and disengage the “Carriage Lock Mechanism”. Then, move the carriage to the center of the platen.
3. Push “Holder, Pulley, Driven” to loosen the timing belt and detach the timing belt from the pulley of the CR motor.

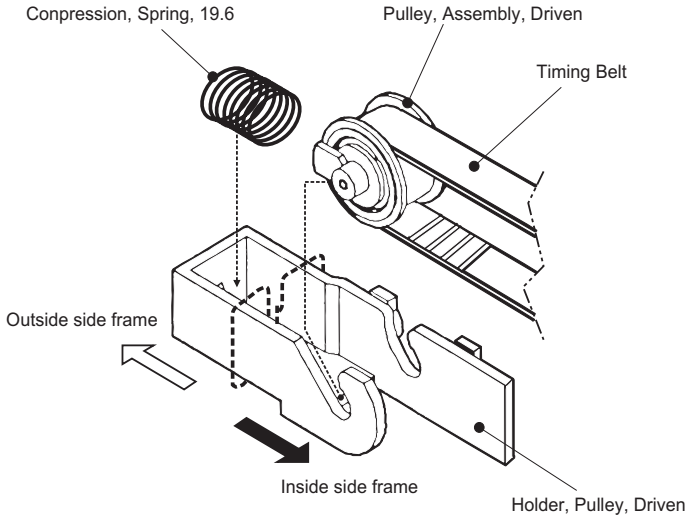

Figure 4-12. Timing Belt Removal

4. Remove 2 screws securing the motor, and remove “Motor, Assembly, CR”.

CHECK POINT

When installing “Motor, Assembly, CR”, be sure that 2 projections of the motor bracket are inserted to the holes of the frame.

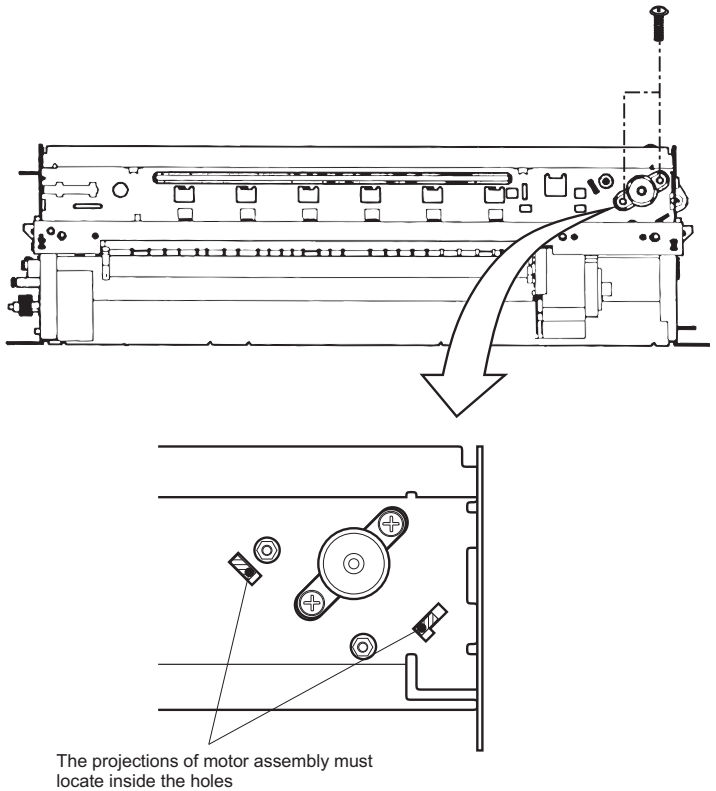

Figure 4-13. Motor, Assembly, CR Removal

ADJUSTMENT REQUIRED

After replacing “Motor, Assembly, CR”, perform Bi-D adjustment. (See “Bi-D Adjustment” on page -86)

4.2.5.4 Motor Assembly PF Removal

1. Remove the upper housing.(See “Housing Removal” on page -54)
2. Remove “Absorber Tray, Assembly;A”. (See “Absorber Tray, Assembly;A Removal” on page -58)
3. Remove the following gears which are located at the left side of the printer mechanism.
   - Gear, 67.2
   - Combination gear, 8.8,21.6
   - Combination gear, 8,14.4
   - Gear, 36

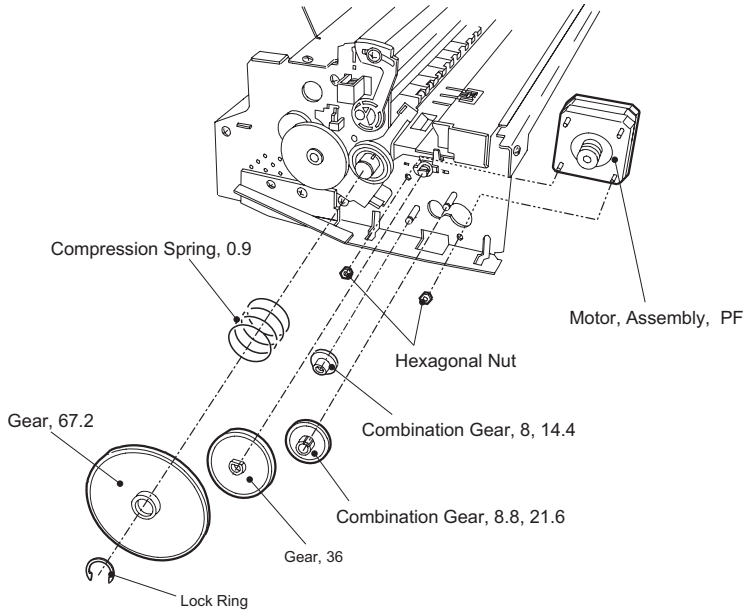

Figure 4-14. Motor, Assembly, PF Removal

4. Remove the hexagon nut and ”Motor, Assembly, PF”.

CHECK POINT

- **When removing the “Motor, Assembly, PF”, first, slightly pull out the “Motor, Assembly, PF” from the frame and slide the motor shaft to a larger cut out of the frame and remove it.**
- **Be careful for the routing direction of the cable from the “Motor, Assembly, PF”.**

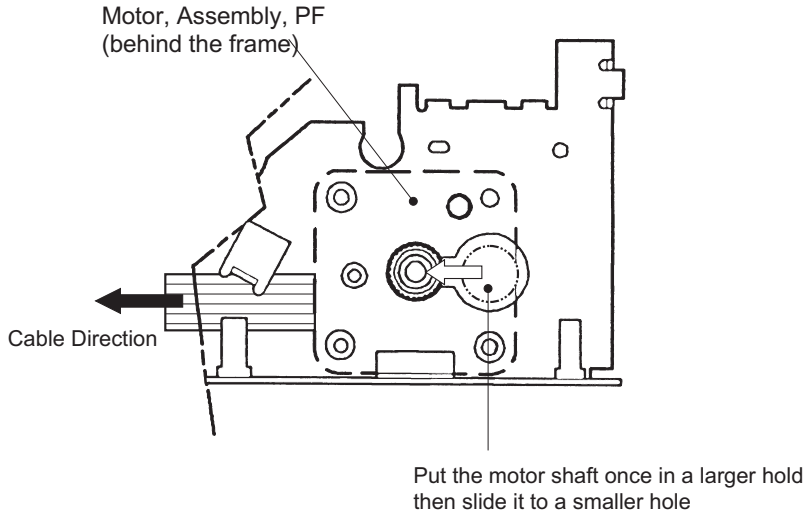
Motor, Assembly, PF
(behind the frame)
Cable Direction
Put the motor shaft once in a larger hold
then slide it to a smaller hole

Figure 4-15. Motor, Assembly, PF Installation

4.2.5.5 ASF, Assembly Removal

1. Remove the upper housing.(See “Housing Removal” on page -54)
2. Release the hook and remove “Gear,34” from the roller shaft of “ASF, Assembly”.
3. Remove the cable from a hook of “ASF Assembly” and cable hook of the “Printer Mechanism”.
4. Remove a “Shaft, Fixing, CR” and one screw securing “ASF, Assembly” to the printer mechanism frame.
5. Remove the “ASF Assembly” from the mechanism by detaching the projection at the left of “ASF Assembly” from the hole of the mechanism.

CHECK POINT

- **When assembling “ASF, Assembly”, make sure that “ASF, Assembly” is firmly attached to the mechanism.**
- **Use the fixing screws at the specified positions below.**
  ***Printer Left side: “Shaft, Fixing, CR”**
  ***CR motor side: CBS Screw with washer**

CAUTION

When installing the “ASF, Assembly”, be sure that no cables are pinched between “ASF Assembly” and frame. Especially, if the cables from the motor is pinched, there is a danger of short-circuit and possibly causes hazardous problem such as over-heating or burning of components.

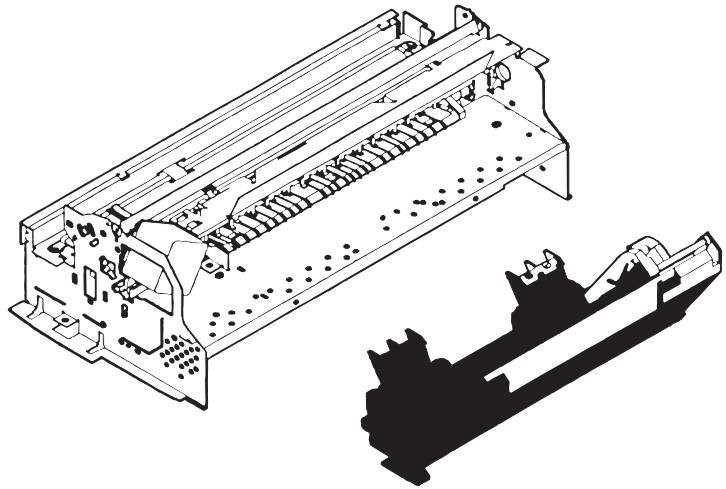

Figure 4-16. ASF, Assembly Removal

4.2.5.6 Paper Feed Roller Assembly Removal

1. Remove “ASF, Assembly”. (See “ASF, Assembly Removal” on page -65)
2. Remove “Torsion Spring,41.2” by unhooking one end from the ASF frame and remove “Lever, Brake”.
3. Remove “Bush, Fixing, Shaft” from the right end of “Shaft, Roller, LD” and remove “Lever, Hopper, Release”.
4. Move the left paper feed to the center and remove the cam fixing bush (white plastic) attached to the left side of “Shaft, Roller LD”.
5. Push the “Shaft, Roller, LD” to the left and remove the “Bush, Fixing, Shaft, Left” after releasing its hook.
6. Unlock the right and left bottom edges of “Hopper Assembly” from the “Frame, ASF”.
7. Push out “Shaft, Roller, LD” to the right while lifting up the right side of “Paper Feed, Roller Assembly, Right”, and remove “Shaft, Roller, LD” from the left side of “Frame, ASF”.
8. Pull out cam part of “Hopper, Assembly” from the right hole of “ASF, Frame”, holding down the “Upper, Assembly” by hand. From “ASF, Assembly”, left and right “Paper Feed Roller Assembly” and “Hopper, Assembly” will be separated.

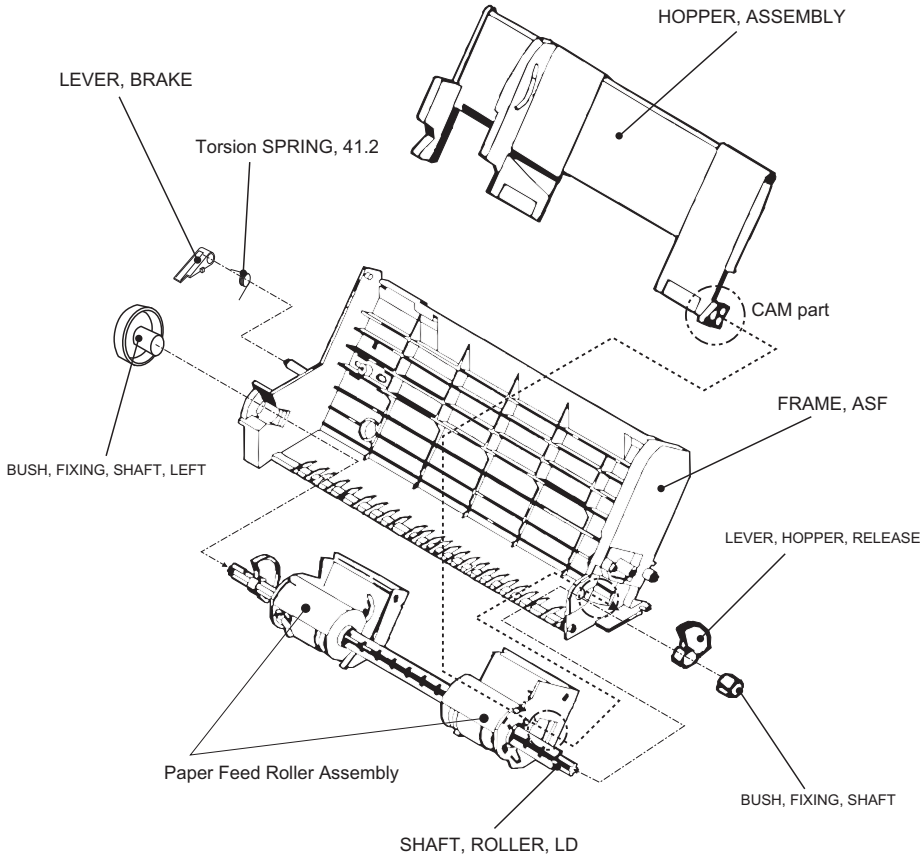

Figure 4-17. ASF Disassembly

CHECK POINT

- **When removing or installing the “Hopper, Assembly”, be careful not to let the grease attach to the other parts. If it is attached, wipe off completely.**
- **Be careful of the direction when installing “Lever, Hopper, Release”.**
- **Make sure that bushes at the both ends of the shaft are firmly attached.**

4.2.5.7 Roller Assembly, LD Left/Right Removal

1. Remove “ASF, Assembly”. (See “ASF, Assembly Removal” on page -65)
2. Remove right and left “Compression Spring, 1.66” from the back of “Hopper, Assembly”.
3. Pull out the cam part of “Hopper, Assembly” through the hole of the right frame of “Paper Feed, Roller Assembly, Right”. This will separate “Paper Feed, Roller Assembly” and “Hopper, Assembly”.
4. Unlock “Roller Assembly, LD” from the assembly frame and remove “Cover, Roller, LD” by unhooking it from the assembly frame. Then, remove “Roller Assembly, LD”.

CHECK POINT

- **When installing “Roller Assembly, LD”, make sure that it is hooked to the assembly frame firmly.**
- **Before re-assemble the unit, make sure that “Compression Spring, 1.66” is set on the assembly frame and hooked to the hooks as it is shown in the figure. This helps you easier assembly. After assembling the unit, do not forget to unhook the springs by rotating the spring from the holes located at the back of the ASF assembly.**

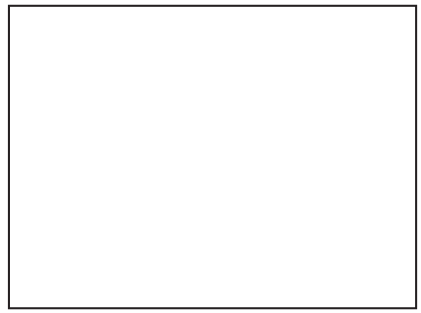

Figure 4-18. “Roller Assembly, LD” Removal

4.2.5.8 Carriage Assembly Removal

1. Remove the upper housing.(See “Housing Removal” on page -54)
2. Push “Holder, Pulley, Driven” to loosen the timing belt and detach the timing belt from the pulley of CR motor assembly.
3. Take out “Compression Spring, 19.6” from “Holder, Pulley, Driven”.
4. Remove “Pulley, Assembly, Driven” with the timing belt from the “Holder, Pulley Driven”.
5. Move the “Holder, Pulley, Driven” and release the hook, then remove it from the frame.
6. Release the hook and remove the “Lever, PG”.
7. Release the hook of “Lever, PG, Sub” and remove “Lever, PG, Sub” and spring washer from the edge of the “Shaft, CR, Guide”.
8. Remove one screw securing “Bush, Parallel Adjust, Right” from the right frame.
9. Rotate the “Bush, Parallel Adjust, Right” and match it with the cut out of the frame. Then, remove the “Bush, Parallel Adjust, Right”.

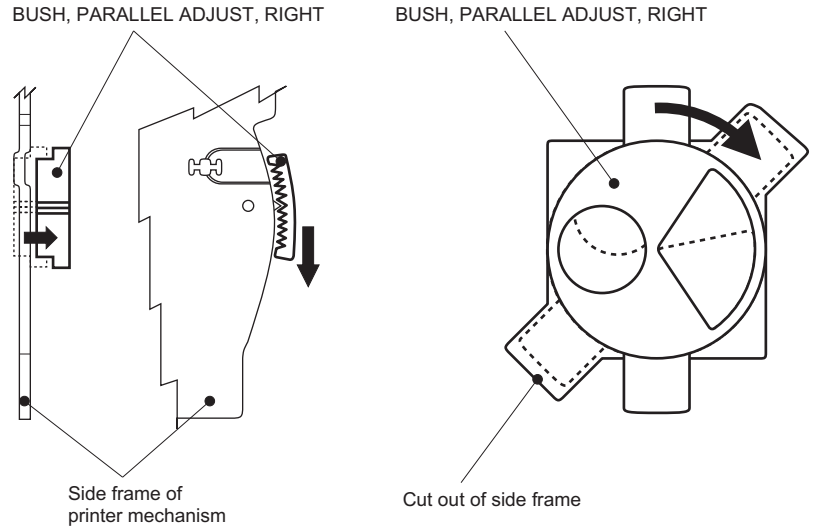

Figure 4-19. Bush Parallel Adjust Removal

CHECK POINT

When installing the spring washer, convex side should be facing to the “Bush, Parallel Adjust, Right”. Be careful not to install in wrong direction.

ADJUSTMENT REQUIRED

Perform following adjustments, after replacing or removing “Carriage Assembly”.

- **Paper Gap Adjustment (See “Paper Gap Adjustment” on page -78)**
- **Head Angular Adjustment (See “Head Angular Adjustment” on page -84)**
- **Bi-D Adjustment (See “Bi-D Adjustment” on page -86)**

Figure 4-20. Carriage Assembly Removal

4.2.5.10 Roller, Assembly, PF Removal

1. Remove the upper housing.(See “Housing Removal” on page -54)
2. Remove “Carriage, Assembly”. (See “Carriage Assembly Removal” on page -68)
3. Remove “PE Sensor Assembly”. (“PE Sensor Assembly Removal” on page -70)
4. Remove 2 screws securing “Guide board, Cable” to the printer mechanism, then remove “Guide Board, Cable”.

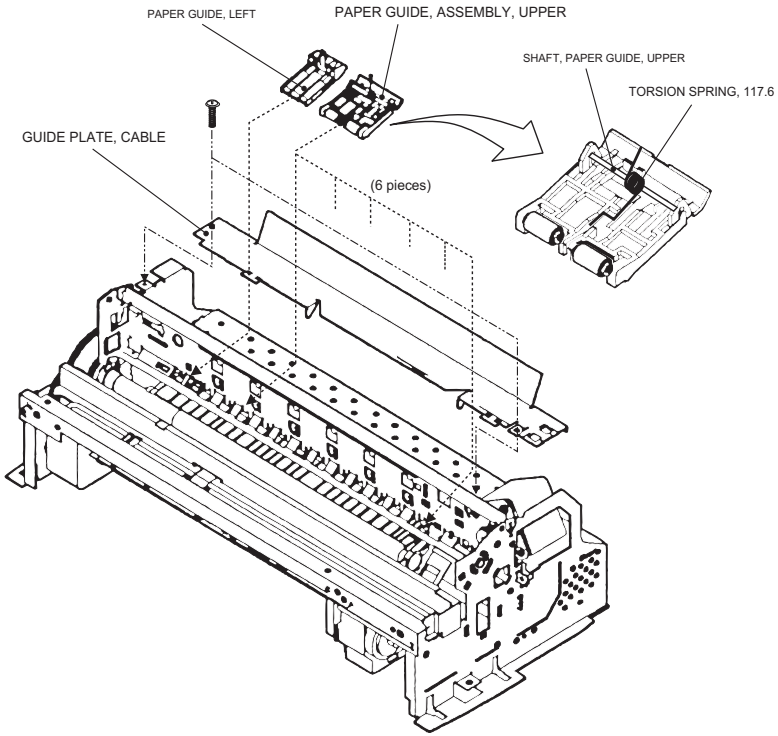

Figure 4-22. “Paper Guide, Assembly” Removal

5. Remove “Torsion Spring,117.6” from the frame and remove 6 pieces of “Paper Guide Assembly, Upper”.
6. Remove “Paper Guide, Front;B”, releasing its hook.

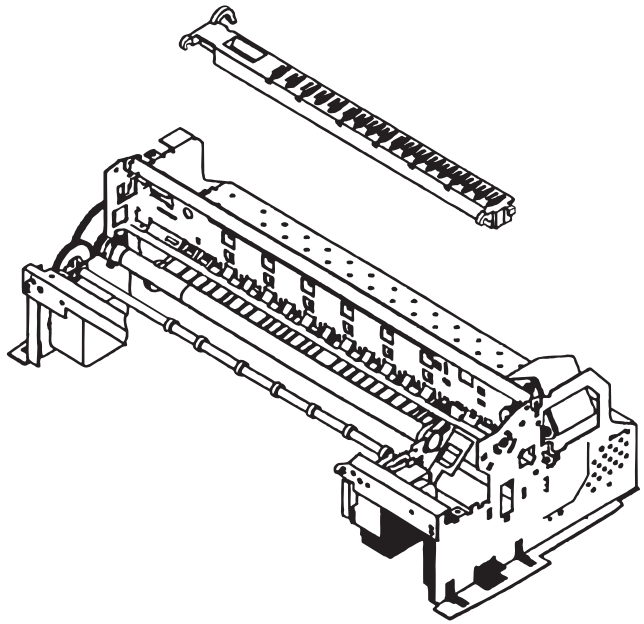

Figure 4-23. “Roller, Assembly, Paper Exit” Removal

7. Release the locks of right and left shaft supports for the “Roller Assembly, Paper Exit”, and remove the “Roller, Assembly, Paper Exit”.
8. Unlock and release the left shaft support of “Roller, Assembly, PF”, and match the cut out of the frame shaft and protrusion of the shaft support.

9. Move the whole “Roller, Assembly, PF” to the left direction, and remove the “Roller, Assembly, PF”.

CHECK POINT

- **When reinstalling “Paper Guide, Assembly, Upper” at the right edge, be careful not to damage the “PE Sensor Lever”.**
- **Be careful not to damage the hook, when removing or installing “Paper Guide, Front; B”.**
- **Be careful not to damage the black coated part of “Roller, Assembly, PF” during disassembly and assembly.**
- **Be careful not to damage the gear, especially engaging part.**

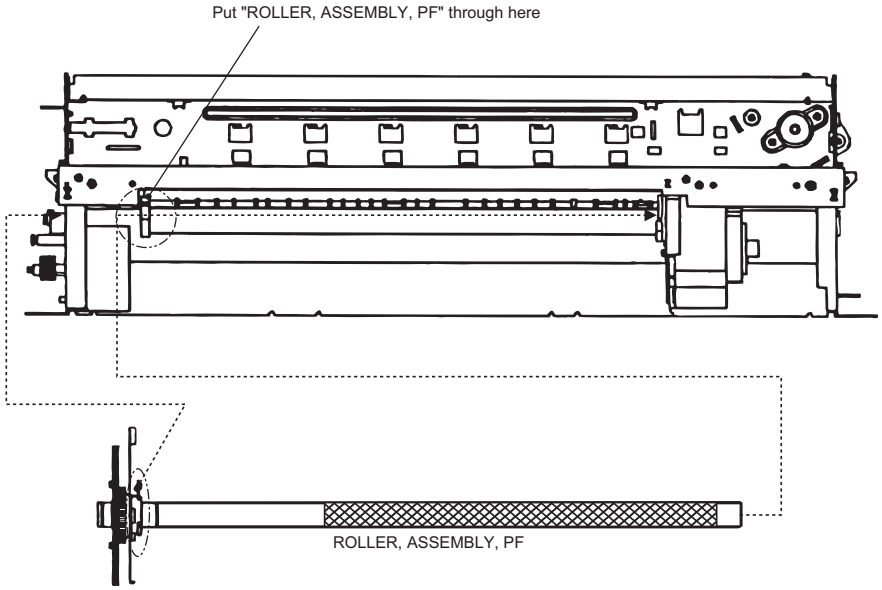

Figure 4-24. “Roller, Assembly, PF” Removal

4.2.5.11 HP Sensor Removal

1. Remove the upper housing. (“Housing Removal” on page -54)
2. Disconnect the cable from “HP Sensor” and remove it by releasing its hook.

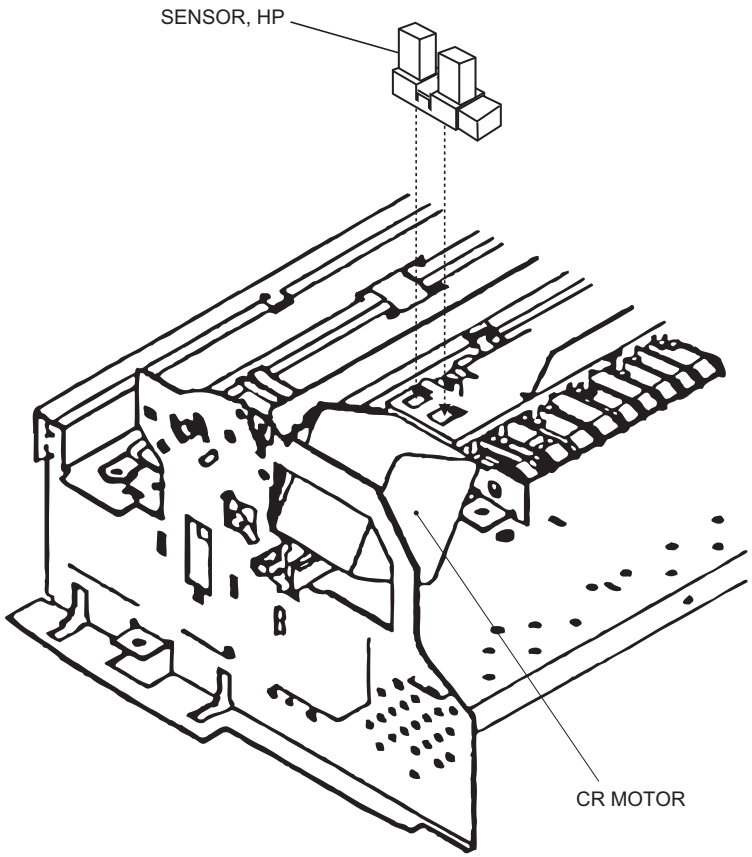

Figure 4-25. HP Sensor Removal

4.2.5.12 Cartridge Sensor(Sensor, I/C) Removal

1. Remove one screw securing “Bush Holder, Sensor, I/C” to the carriage assembly, and remove it.

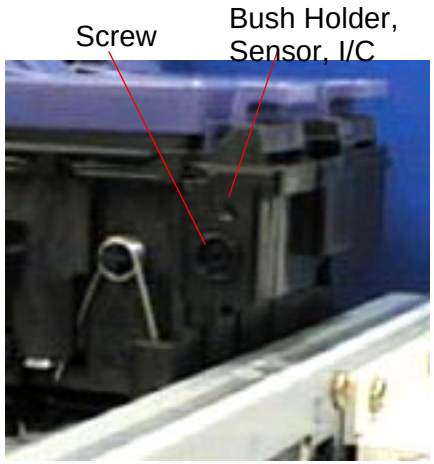

Figure 4-26. Bush Holder, Sensor, I/C Removal

2. Remove “Harness, I/C” from the clamp part of the carriage.

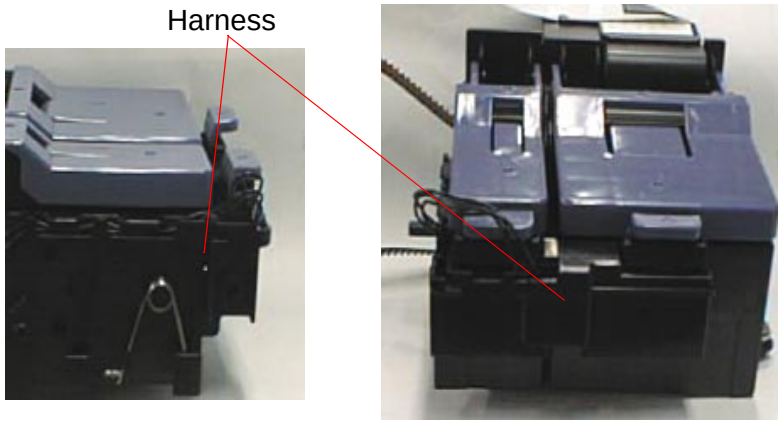

Figure 4-27. Removing Harness

3. Release 4 hooks(2 outer hooks, 2 inside hooks), which secure “Holder, Sensor, I/C” with the carriage assembly”, and remove the “Holder, Sensor, I/C” upward.

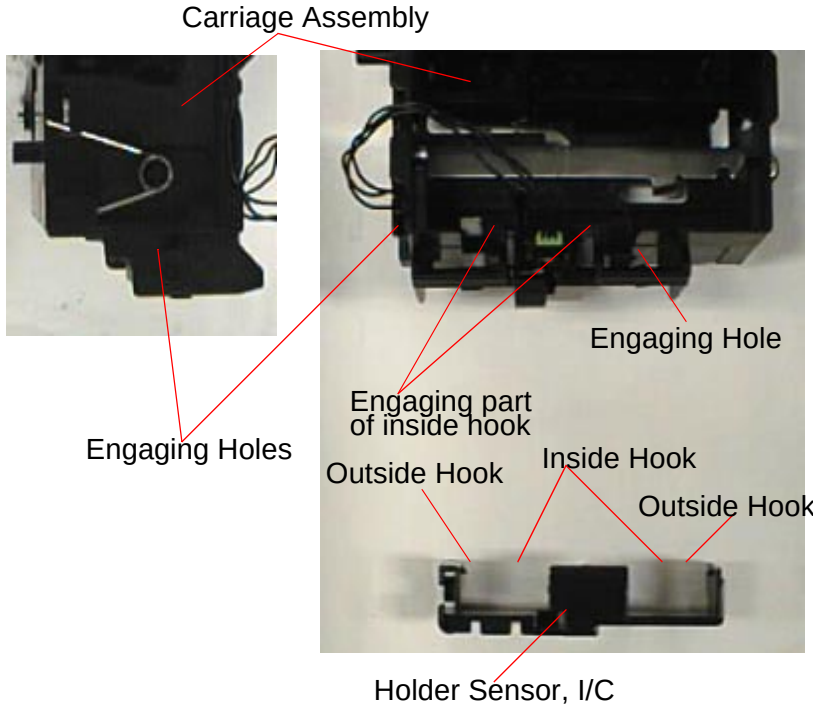

Figure 4-28. Holder,Sensor, I/C Removal

4. Release 2 hooks of the hook, which secure the sensor to the carriage assembly”, and remove the sensor and harness.

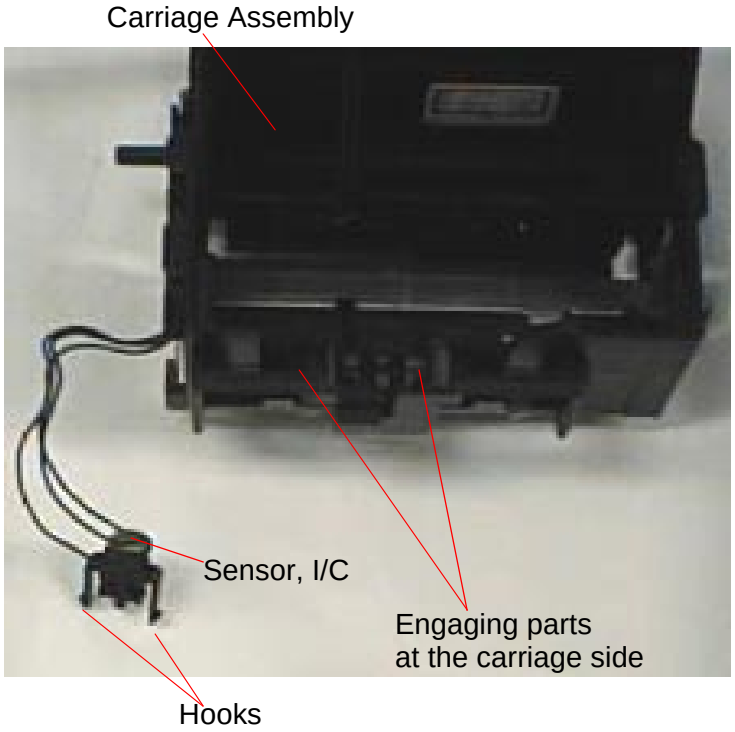

Figure 4-29. Sensor, I/C Removal

5. Separate “Sensor, IC” from the harness by releasing its connection.

CHECK POINT

- **Be careful of the direction of sensor, when installing it. Switch part should face to the front side.**
- **When installing “Holder, Sensor, I/C” to the “Carriage, Assembly”, do not pinch the harness with carriage and holder.**

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5

ADJUSTMENT

5.1 Overview

This section describes the procedure for adjustments required when the printer is disassembled and assembled for repair.

5.1.1 Required Adjustment

Table 5-1 lists all the necessary adjustments for this printer. If any service listed in this table is carried out, all adjustments corresponding to that service should be performed to ensure proper operation of the printer.

Table 5-1. Required Adjustment

Performance Priority	1	2	3	4	5
Service/ Replacing parts	Paper Gap Adjustment	In Charge	VH Setting	Head Angular Adjustment	Bi-D Adjustment
Replacing the printer mechanism	NA	O	O	NA	O
Replacing the C209 Main Board	NA	O	O	O	O
Replacing the print head unit.	NA	O	O	O	NA
Replacing the CR Motor.	NA	NA	NA	NA	O
Replacing or disassembling the carriage assembly.	O	NA	NA	O	O
Replacing or disassembling the Roller Assembly.	O	NA	NA	NA	NA

Note) "O": Required Adjustment.
"NA": Not applicable.

5.2 Adjustment

This section describes the detailed procedures of each adjustment.

5.2.1 Paper Gap Adjustment

When replacing the carriage assembly or removing it during printer mechanism disassembly, perform the paper gap adjustment during assembling and get the standard distance from the surface of the printing head to the paper surface.

CAUTION

- **Do not scratch special coated surface of the PF roller and rib surface of "Paper Guide, Front ;B".**
- **Be careful not to leave any dirt or scars on the surface of the print head.**

☐ Paper Gap Adjustment

1. Install the "Bush, Parallel, Adjustment" for right and left frame and set them on the peaking of the upper frame side so that they match with the standard mark of "Bush, Parallel, Adjustment".
2. Set the "Lever, PG" front. (Gap: "0")
3. Move the carriage to the center and set the thickness gauge(1.14mm thick) on the fixed position of "Paper Guide, Front;B" as you can see in the figure5-1.

CAUTION

Do not use the same thickness gauge you used for Stylus Photo and Stylus Photo 700.

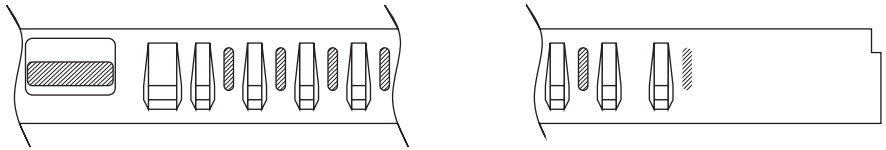


Figure 5-1. Paper Gap Adjustment

4. Move the carriage to the position that the print head overlaps the thickness gauge.

CHECK POINT

- **Leave the thickness gauge on the flat side of the rib of the front paper guide;B.**
- **When you move the carriage, move it , pulling the timing belt with your hand.**

5. Move the "Bush, Parallel, Adjustment, Right" to the rear until the thickness gauge moves with the carriage when you move the carriage about 20mm right and left. (Gap will be narrowed)

6. From this thickness with which the thickness gauge stars moving with the carriage, move the gear of the “Bush, Parallel, Adjustment one notch forward you. (Gap will be narrowed)
   At this time, make sure that the thickness gauge does not move.

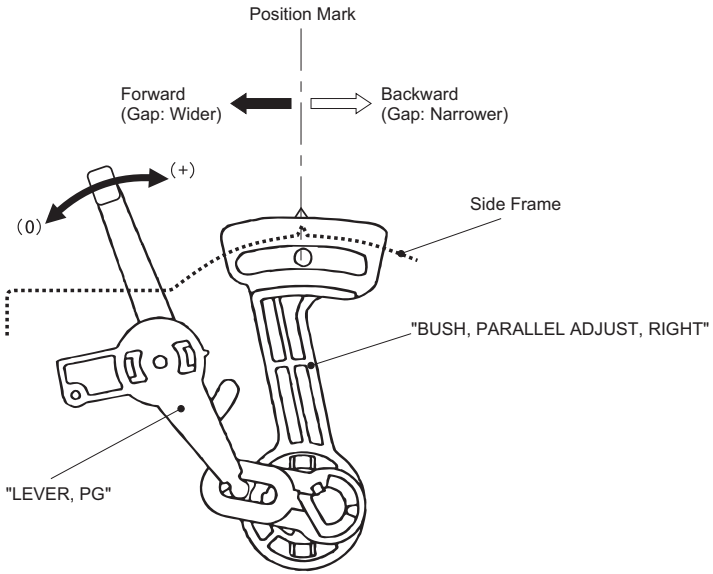


Figure 5-2. Paper Gap Adjustment

7. Perform the same procedures above (from 1 to 6) to the “Bush, Parallel, Adjustment, Left”.

- ☐ Check the Gap
  After completing the adjustment to “Bush, Parallel, Adjustment, Left”, check the paper gap at the right side one more time.
- ☐ Fixing “Bush, Parallel, Adjustment, Right/Left”
  After completing the paper gap adjustment, fix the “Bush, Parallel, Adjustment, Left/ Right” by screws.

5.3 Adjustment by Adjustment Program

In this printer, it is necessary to set the correct information for each printer mechanism in order to maintain consistent printing function and quality, eliminating difference of each printer mechanism's characteristics. Therefore, in case that the combination of the printer mechanism and main board changes or the print head is replaced during the repair service, you must set and save the correct information to the main board, using the exclusive adjustment program.

5.3.1 Adjustment Program

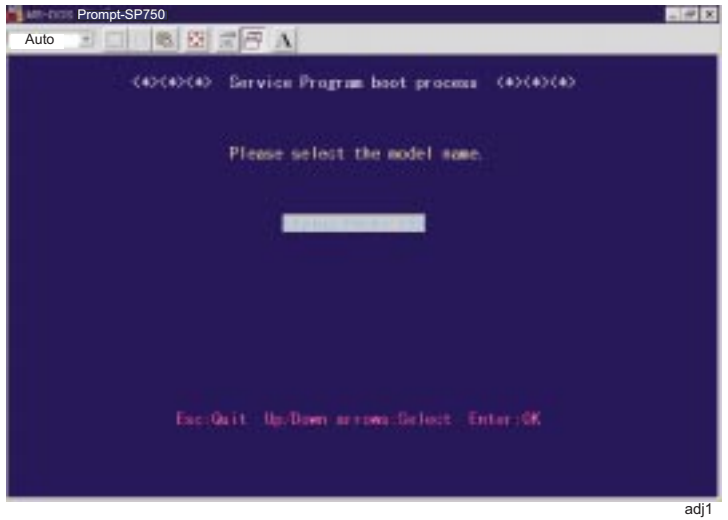
This adjustment program(Sp750.EXE) consists of the menu to input the model name and main menu for adjustments.

CAUTION

- **You have to go through the menu to input the model name in order to go to the main menu.**
- **If the control board is replaced, it is necessary to input the model name.**

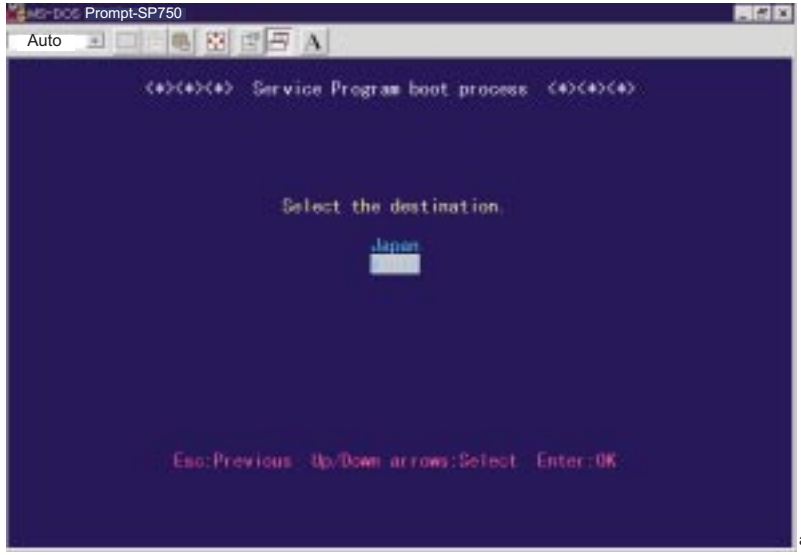
5.3.1.1 How to use the Adjustment Program

1. Connect the PC(DOS/V computer) and printer by the parallel interface cable, and turn on the printer, then, turn on the computer.
2. Either copy the adjustment program file to the hard disk of the computer or insert the disk of adjustment program to the floppy disk drive.
3. On the MS-DOS Prompt screen, type the program file name(Sp750) and press return key.
4. Following screen appears and press Enter key.



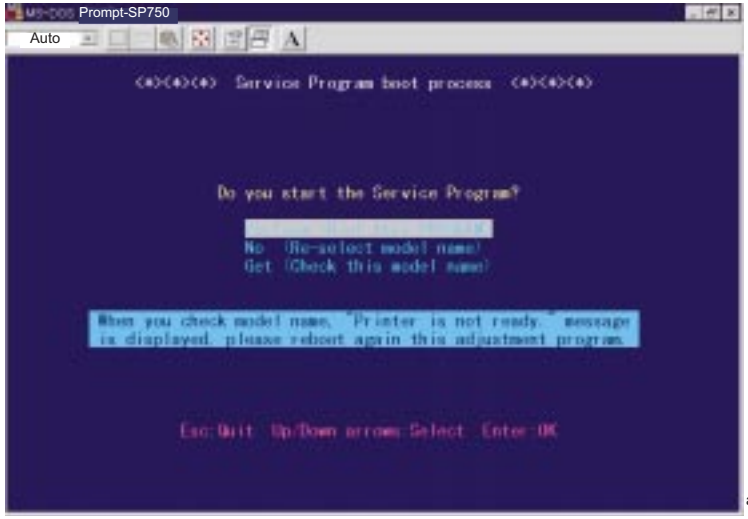
adj1

5. After setting the model name, program goes to the destination menu.



adj2

6. Select “World”.


Prompt-SP750
Auto
Service Program boot process
Do you start the Service Program?
No (Re-select model name)
Get (Check this model name)
When you check model name, "Printer is not ready." message is displayed, please reboot again this adjustment program.
Esc:Quit Up/Down arrows:Select Enter:OK

adj3

7. Select “Perform”, if “Printer is not ready” message is not indicated.

After this screen, menu screen will appear. Each function on the main menu can be executed by ESC and ENTER keys.

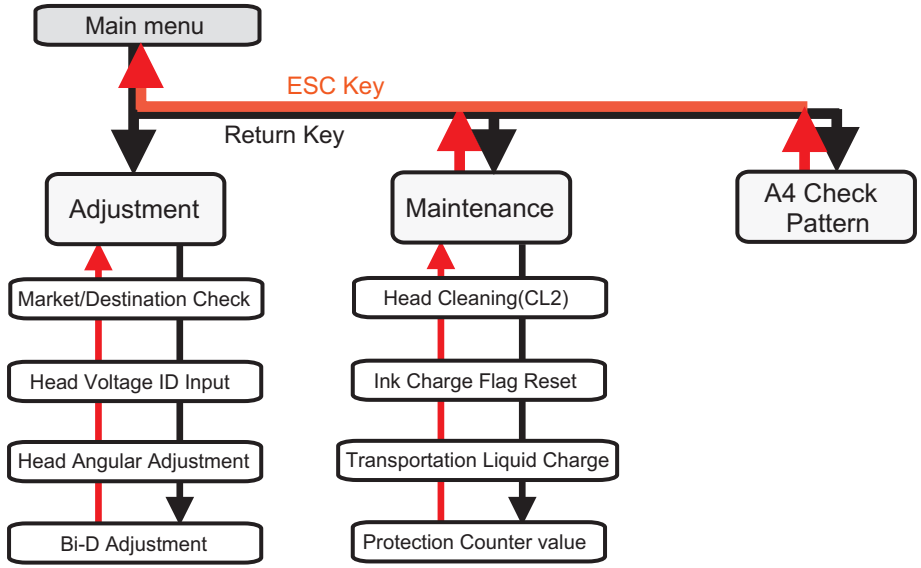
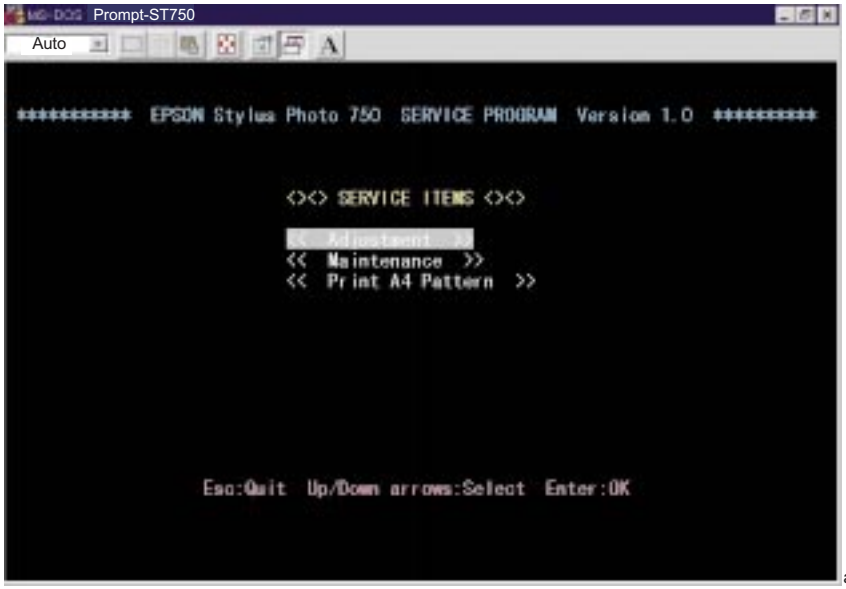


Figure 5-3. Options in the Program and Keys to Use

5.3.2 Setting Destination Information

1. Select “Adjustment” on the main menu and press Return key. Program goes to the adjustment menu.



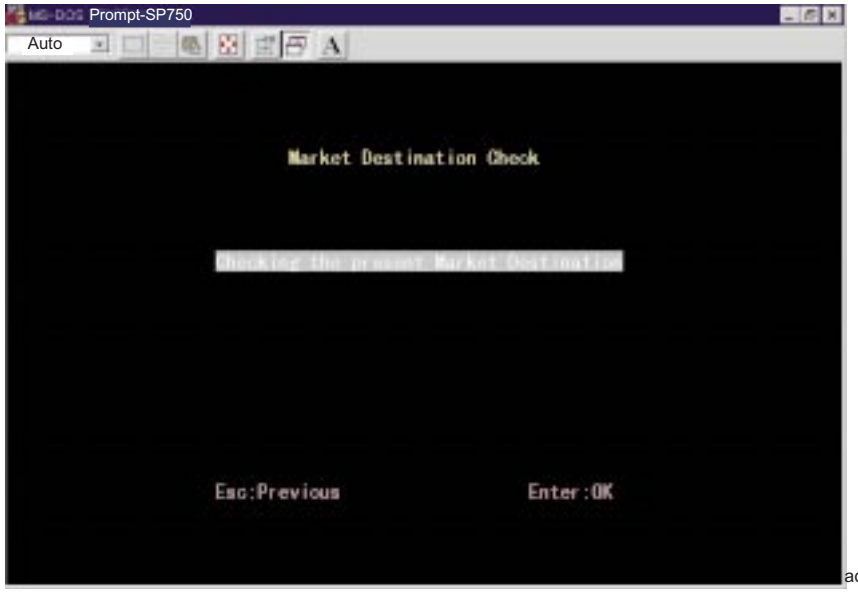
adj4

2. Select “Market Destination Check” and press Return key.

3. The screen shows “Checking the present Market Destination”. Press Return key. Then, screen will indicate “Market Destination is Standard for World”.

4. Go back to the adjustment menu by pressing ESC key. If you want to change the destination, go back to the menu to input the model name. Reset by changing the model name.

adj5

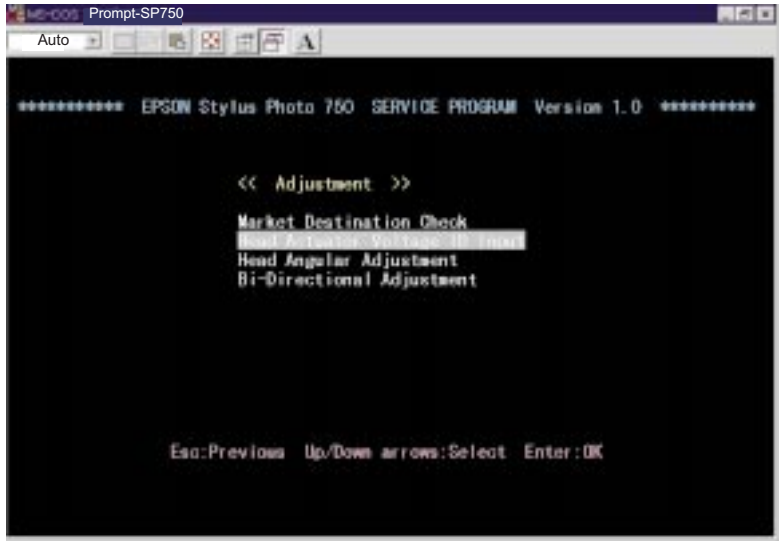


adj6

5.3.3 Head Voltage ID Adjustment

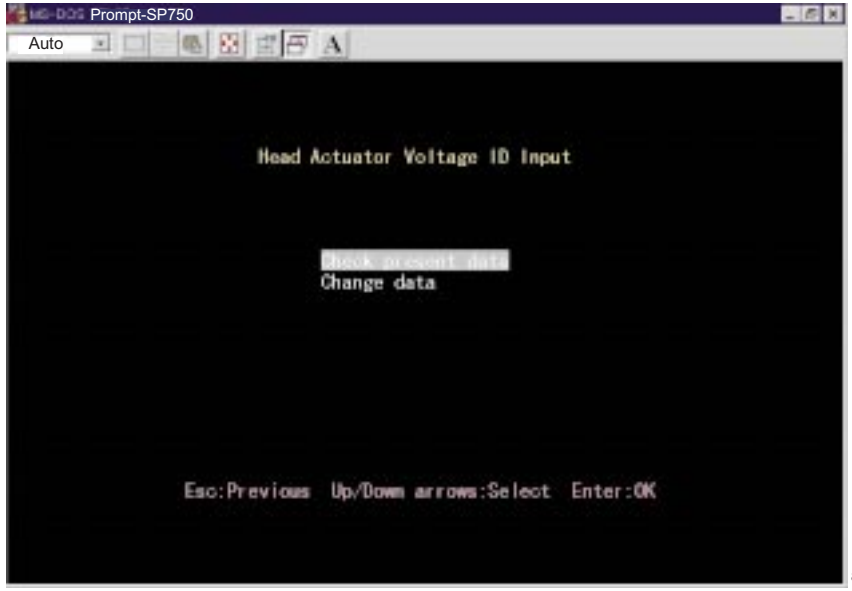
Since the elements used in the print head differs, it becomes necessary to set the head voltage in appropriate condition so that the amount of discharged ink becomes even. The setting value is determined according to the test result of head characteristics on the production process.

1. Select “Adjustment” on the main menu and press Return key. Program goes to the adjustment menu.



adj8

2. Select “Head Actuator Voltage ID Input” and press Return key. Following screen appears.



adj9

3. Select “Change Data”, then the screen to input the Head ID appears.

4. Input the Head ID (8 digits).
   You can find VH voltage ID on the following position:
   - Print Head: On the side face of the print head.
   - Printer mechanism: On the label of the packing box of the printer mechanism.

5. After completing the Head ID input, press ESC key until the screen returns to the adjustment menu.

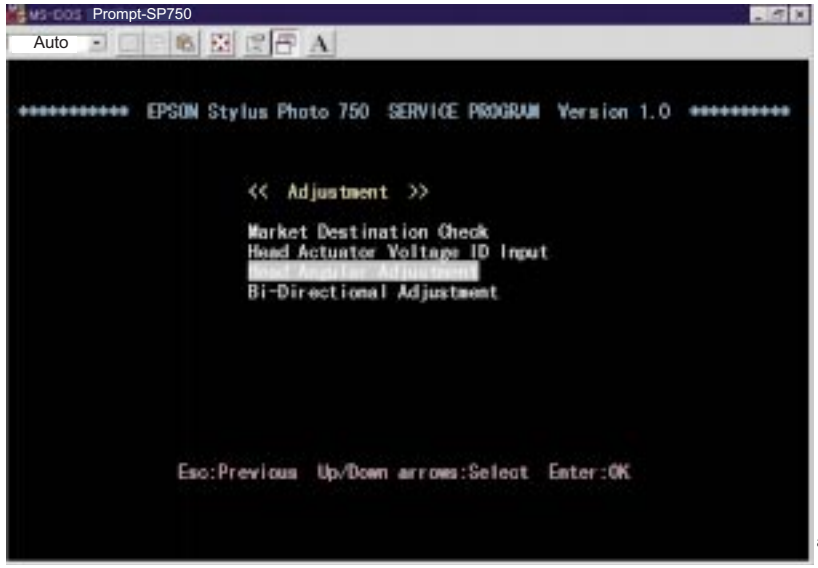
If you wish to check the head data, select “Check the present data” to check the current head data.

5.3.4 Head Angular Adjustment

During production, slight variations are created in print heads and carriage (which are used as a print head base). If these differences are not adjusted, they can adversely influence the print head angle, and result in the poor print quality.

1. Select “Adjustment” on the main menu and press Return key. Program goes to the Adjustment menu.

2. Select “Head Angular Adjustment” and press Return key.



adj11

3. Loosen the screw fixing the print head. (See Figure 5-4, "Screw position for fixing the print head")

4. Select “Print the Head Angular Adjustment Pattern”, and press Return key. Then, the printer prints “Head Angular Adjustment Pattern”.

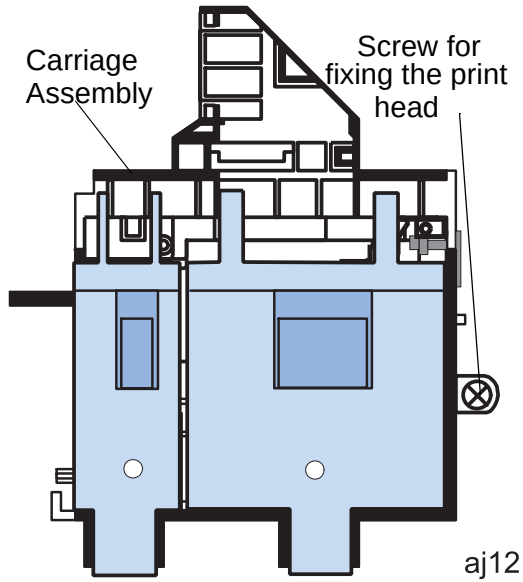
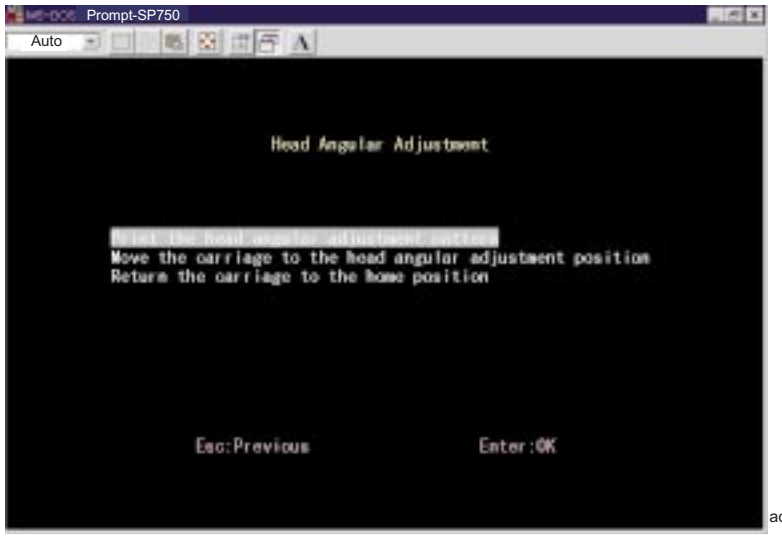


Figure 5-4. Screw position for fixing the print head



adj12

5. Refer to the printing pattern, and adjust the head angle by using the adjustment lever.

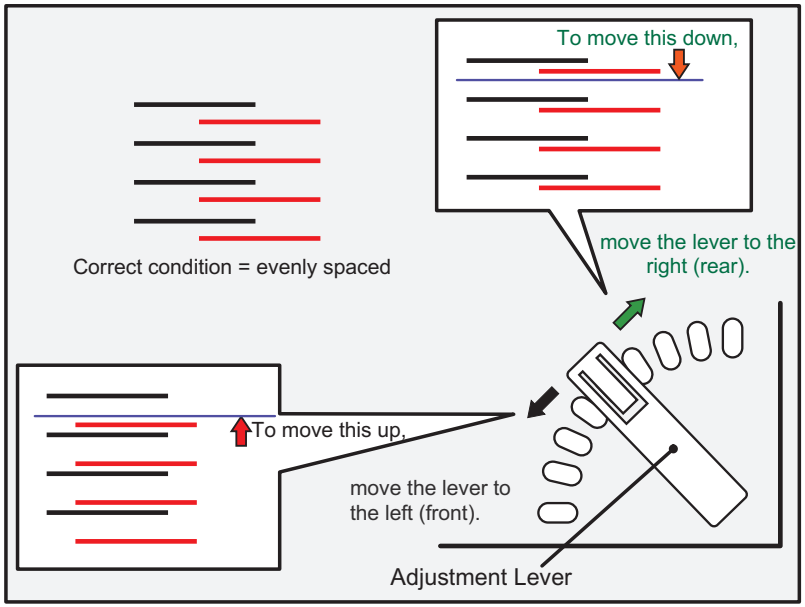

To move this down,
Correct condition = evenly spaced
move the lever to the right (rear).
To move this up,
move the lever to the left (front).
Adjustment Lever
aj11

Figure 5-5. Lever Operation and Corresponding Change in Pattern

CHECK POINT

- **When performing the head angular adjustment, select “Move the carriage to the head angular adjustment position” so that the carriage moves to the center of the printable area. This enables the adjustment lever to move easily. However, since the head nozzle may dry out, move it within 5 seconds.**
- **In order to make the carriage return to the home position, select “Return the carriage to the home position” and press Return key.**

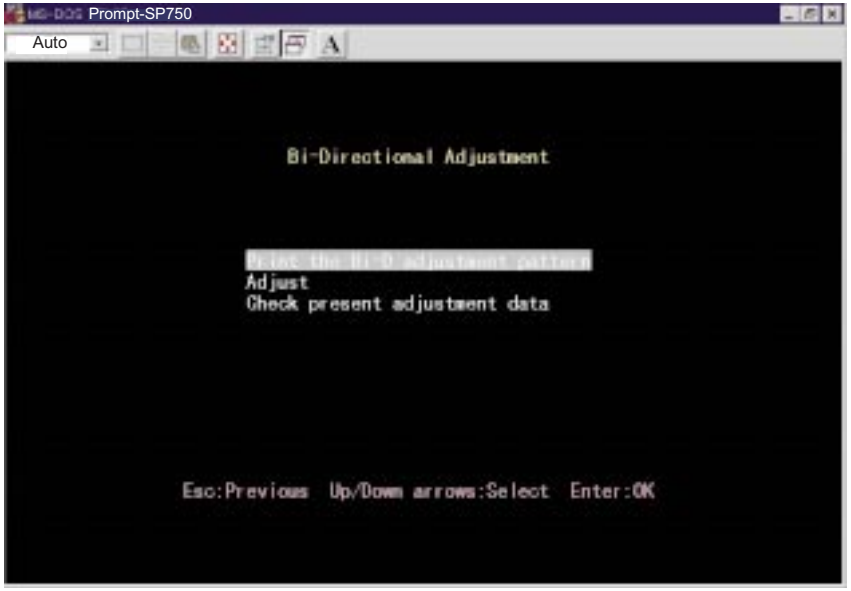
6. Head angular pattern is printed, every time the adjustment lever is moved.
7. Repeat Step 4 to 6 until the angle becomes normal.
8. After adjustment is completed, press ESC key until the screen goes back to the adjustment menu.
9. Tighten the screw for fixing the head.

5.3.5 Bi-D Adjustment

This adjustment is to correct differences in printing positions, which is caused by slippage of printing timing in right and left directions during the Bi-directional printing. The value adjusted in this section will be stored as Bi-D corrected value in the EEPROM on the control board.

1. Select “Adjustment” on the main menu and press Return key. Program goes to the Adjustment menu.

2. Select “Bi-Directional Adjustment” and press Return key. Following screen appears.



adj13

3. Select “Print the Bi-D Adjustment Pattern”, and press Return key twice. 3 Bi-D patterns of the current setting value and +/-2 levels are printed at variable dot and normal dot.

4. Refer to the Pattern Sample and see if all the lines are aligned from the printed pattern.

5. Select “Adjust” on the Bi-D Adjustment Menu, if there is any non-aligned lines.

6. Refer to the pattern sample below and input the variable dot and normal dot. (Setting range: -36 ~+36)

Figure 5-6. Bi-D Adjustment Pattern Sample

7. Repeat Step 3 to 6 until Bi-D pattern become correct.

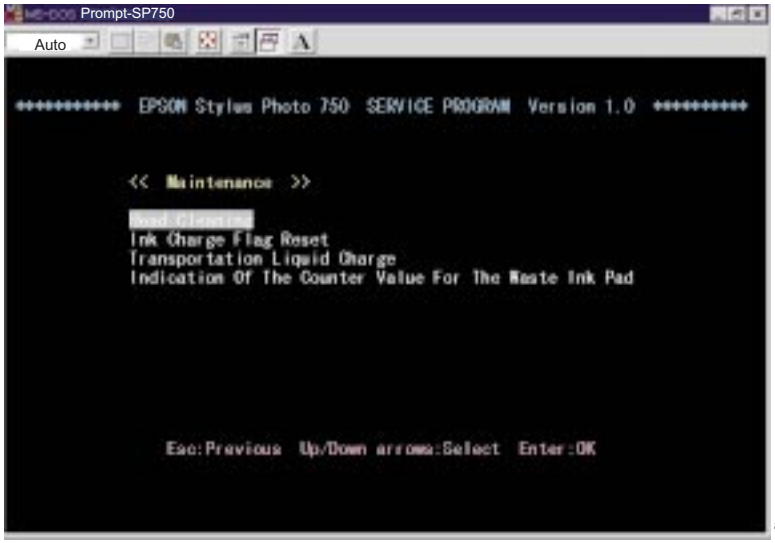
8. To finish the adjustment, press ESC key until the adjustment menu appears.

5.3.6 Head Cleaning

In this function, the same cleaning as the one from the control panel can be performed from the adjustment program. With this sequence, you can forcibly solve the clogged nozzle problem caused by viscous ink.

1. Select “Maintenance” on the Main Menu and press Return key.

2. Select “Head Cleaning” and press Return key.


Prompt-SP750
Auto
********** EPSON Stylus Photo 750 SERVICE PROGRAM Version 1.0 **********
<< Maintenance >>
Head Cleaning
Ink Charge Flag Reset
Transportation Liquid Charge
Indication Of The Counter Value For The Waste Ink Pad
Esc:Previous Up/Down arrows:Select Enter:OK
adj15

3. Cleaning Mode Selection Menu appears. Again, press Return key, then, cleaning will be performed.

adj16

4. After the cleaning is completed, press ESC key until the screen returns to the Maintenance Menu.

CAUTION

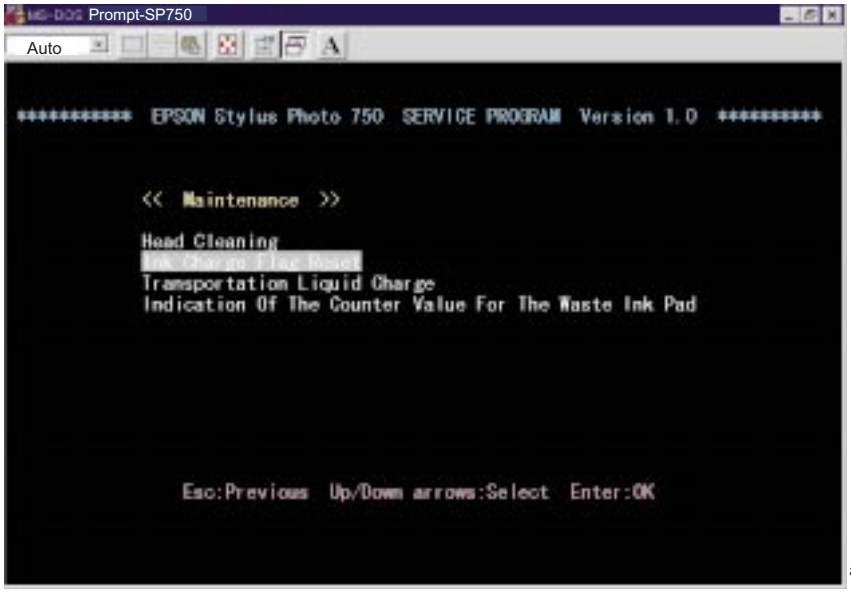
- **Since the head cleaning consumes a lot of ink, avoid excessive cleaning.**
- **Ink quantity that is used for the cleaning differs according to the previously printed lines or ink quantity left in the ink cartridge.**
- **If the problem is not solved by this head cleaning, sometimes the initial ink charge may be able to recover the condition.**

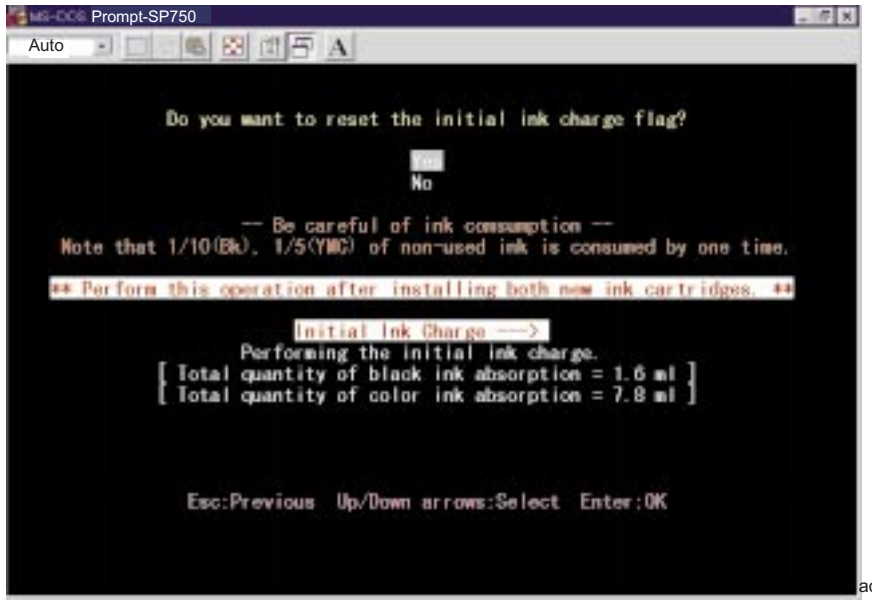
5.3.7 Initial Ink Charge

There is no ink charged in the ink path of a spare print head and printer mechanism. Therefore, after you replace any of the following units, perform initial ink charge and return the printer after making sure that ink is ejected correctly from the print head. Perform initial ink charge at the following cases.

- After replacing the printer mechanism
- After replacing or removing the print head

1. Select “Maintenance” on the main menu and press Return key. The screen goes to the Maintenance Menu.
2. Select “Initial Charge Flag Reset” and press Return key. Then, the screen goes to the “Initial Ink Charge Check Menu”.


MS-DOS Prompt-SP750
Auto
********** EPSON Stylus Photo 750 SERVICE PROGRAM Version 1.0 **********
<< Maintenance >>
Head Cleaning
Ink Charge Flag Reset
Transportation Liquid Charge
Indication Of The Counter Value For The Waste Ink Pad
Esc:Previous Up/Down arrows:Select Enter:OK
adj17


MS-DOS Prompt-SP750
Auto
Do you want to reset the initial ink charge flag?
Yes
No
-- Be careful of ink consumption --
Note that 1/10(Bk), 1/5(YMC) of non-used ink is consumed by one time.
** Perform this operation after installing both new ink cartridges. **
Initial Ink Charge --->
Performing the initial ink charge.
[Total quantity of black ink absorption = 1.6 ml]
[Total quantity of color ink absorption = 7.8 ml]
Esc:Previous Up/Down arrows:Select Enter:OK
adj18

3. If you wish to perform the initial ink charge, press Return key. If not, press ESC key.

CAUTION

- **Initial ink charge is performed, when the printer, which is left at least 10 seconds after turning the power Off, is turned back On again.**
- **Since this operation consumes large amount of ink, do not perform unnecessarily.**

It takes about 2 minutes to complete the initial ink charge.

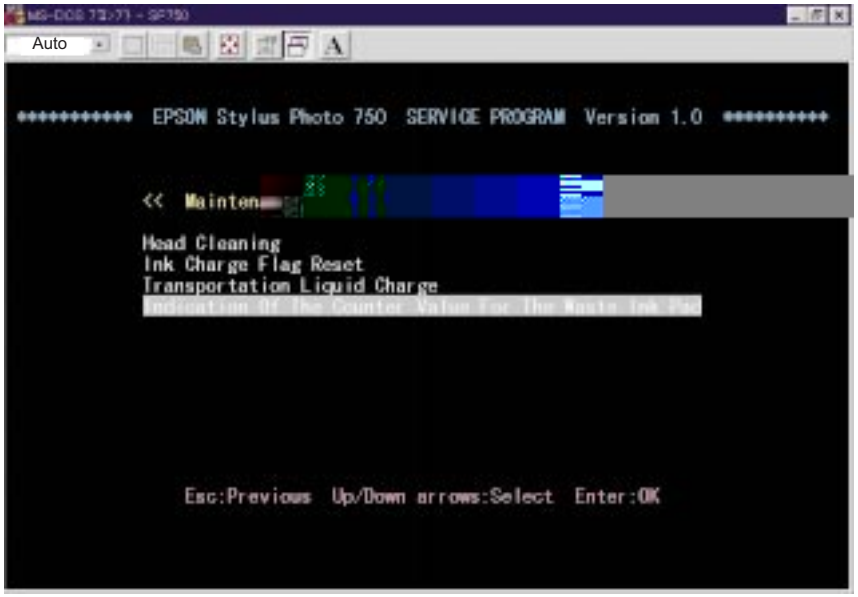
5.3.8 Counter Value for Ink Absorber

This function is for indicating the protection counter value for the waste ink absorber and resetting the counter value. This function can be also performed from the control panel. (See “Special Setting Mode” on page -22)

5.3.8.1 Protect Counter Value

1. Select “Maintenance” on the main menu and press Return key. The screen goes to the maintenance menu.

2. Select “Indication of the Counter Value for the Waste Ink Pad”, and press Return key.



3. The screen goes to “Protect Counter Check/Clear Menu”. Select “Check the present counter value” and press Return key. Then, current protector count value appears.

4. If the counter value exceeds the limit, replace the waste ink pad(absorber) and reset the protect counter.

5. Press ESC key and return to the “Protect Counter Check/Clear Menu”.

5.3.8.2 Protect Counter Reset

1. Select “Maintenance” on the main menu and press Return key. The screen goes to “Maintenance Menu”.

2. Select “Indication of the Counter Value for the Waste Ink Pad”, and press Return key. The screen goes to “Protect Counter Check/Clear Menu”.

3. Select “Clear the protect counter value” and press Return key.

4. Check if it is necessary to change the pad or not, and select “Yes” and press Return key.

5. Press ESC key and go back to the Main Menu.

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6

MAINTENANCE

6.1 Overview

This section describes the points and procedures for maintaining the printer in its optimum condition.

6.1.1 Cleaning

This printer has no mechanical components which require regular cleaning. Therefore, note that points suggested below are only to check for dirt, and perform appropriate cleaning if necessary.

CAUTION

- **Never use chemical solvents, such as thinner, to clean the printer. These chemicals can damage the components of the printer.**
- **Be careful not to damage the components when you attempt to clean the inside the printer.**
- **Do not scratch surface(coated part) of "Roller, Assembly, PF". Use soft brush to wipe off any dusts. Use a soft cloth moistened with alcohol to remove the ink stain.**

☐ Exterior parts
Use a clean soft cloth moistened with water and wipe off any dirt. If the exterior parts are stained with ink, use a cloth moistened with neutral detergent to wipe it off.

☐ Inside the printer
Use a vacuum cleaner to remove any paper dust.

6.1.2 Service Maintenance

If the print irregularity missing, white line, etc.) has occurred or the printer indicates "Maintenance Request Error", take the following actions to clear the error.

☐ Head Cleaning
The printer has a built-in head cleaning function and is activated through the control panel operation.

1. Confirm that the printer is in stand-by state(the Power indicator is not blinking), and press "Cleaning" button.
2. The printer enters the built-in cleaning sequence, and head cleaning is performed.

☐ Maintenance Request Error
Ink is used for the operation such as cleaning as well as printing. Therefore, the printer wastes certain amount of ink and counts the amount of the wasted ink and drains it into the waste ink pad(absorber). Once the amount of wasted ink reaches the predefined limit, the printer indicates "Maintenance Request Error". Then, the waste ink pad should be replaced and ink consumption counter recorded in EEPROM should be initialized.

1. Replace "Absorber Tray, Assembly;A".
2. Turn the printer ON, holding down "Load/Eject" and "Cleaning" buttons.
3. Press "Load/Eject" button, while the "Paper Out" LED is blinking.

6.1.3 Lubrication

The type and amount of oil and grease used to lubricated the printer parts are determined based on the results of internal evaluations. Therefore, be sure to apply the specified type and amount of oil and grease to the specified part of the printer mechanism during servicing.

CAUTION

- **Never use oil and the grease other than those specified in this manual. Use of different types of components can damage the component or give bad influence on the printer function.**
- **Never apply larger amount of lubricate than specified in this manual.**

Table 6-1. Specified Lubricants

Type	Name	EPSON Code	Supplier
Grease	G-26	B702600001	EPSON
Oil	0-12	1038991	EPSON

Table 6-2. Lubrication Point

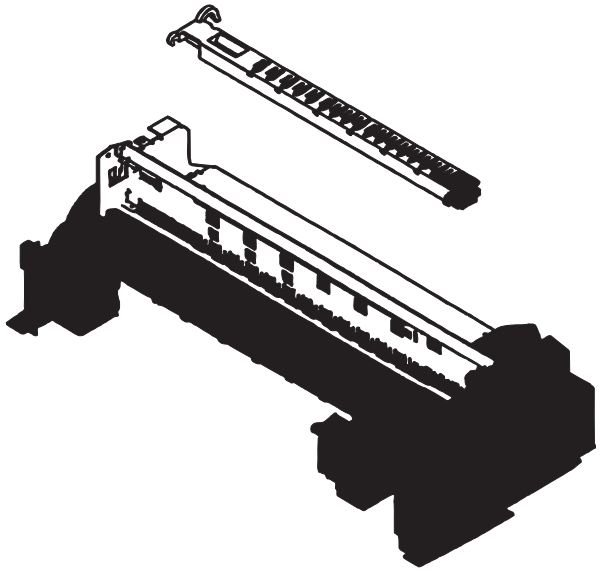
No.	Lubrication Type/Point	Remarks
1	<Lubrication Point> • Contact between “Roller, PF2 and “Paper Guide, Rear”. <Lubrication Type> G-26 <Lubrication Amount> • A half turn of “Roller, PF”	• Apply grease while rotating “Gear, 67.2”. • Do not attach the grease to the paper path. • Use a syringe to apply it.
2	<Lubrication Point> • Contact points between “Paper Guide, Front” and each roller: “Roller, PF” (1 point) “Roller, Exit” (2 points) <Lubrication Type> G-26 <Lubrication Amount> • 10-mm long for “Roller, PF” • 2-mm long for “Roller Exit”	• Lubricate the contact points between the hooks on “Paper Guide, Front” and each roller. • Do not attach the grease to the paper path. • Use a syringe to apply it.
3	<Lubrication Point> • Contact points between the carriage assembly and “Frame, Upper”. <Lubrication Type> G-26 <Lubrication Amount> • Range from the HP sensor installation point to the point where “Guide Plate, Cable” is attached.	• After lubrication, make sure that the carriage moves smoothly. • Use a syringe to apply it. • Use a syringe to apply it.
4	<Lubrication Point> • “Gear 67.2.” • *Combination Gear, 16,21.6” • “Gear, 23.2” <Lubrication Type> G-26	• Rotate gears after applying grease to evenly distribute it. • Use a syringe to apply it.

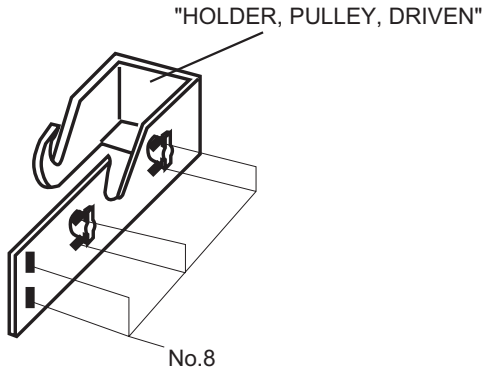
Table 6-3. Lubrication Point

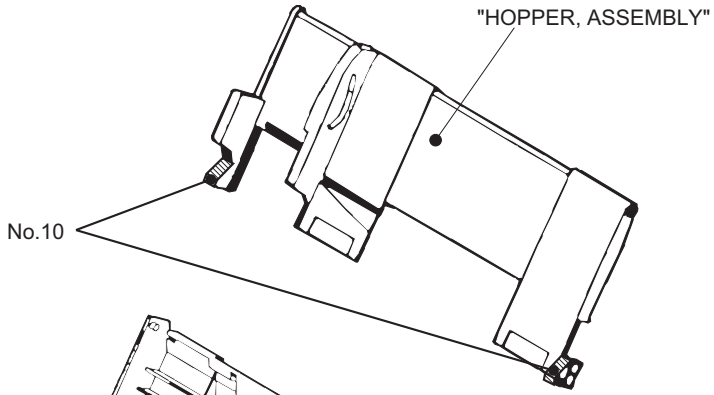
No.	Lubrication Type/Point	Remarks
4	<Lubrication Amount> • 1/4 of gear tooth for “Gear, 67.2” • 1/3 of gear tooth for “Combination Gear, 16,21.6” • 1/3 of gear tooth for “Gear, 23.2”	• Rotate gears after applying grease to evenly distribute it. • Use a syringe to apply it.
5	<Lubrication Point> The shaft for “Gear, 16, 40.8” on “Frame, Left”. <Lubrication Type> G-26 <Lubrication Amount> Approximately 5 mm	• Use a syringe to apply it.
6	<Lubrication Point> • Bushings for “Roller, PF”: Left: Inside the bushing Right: Inside the bushing(near the pump assembly) <Lubrication Type> G-26 <Lubrication Amount> Approximately 3 mm diametrically	• For the right bushing, apply it from the paper path side, and wipe off any sticking out to the cap assembly side. • Rotate “Roller, PF” after applying grease to evenly distribute it in the bushing. • Use a syringe to apply it.
7	<Lubrication Point> • Both Left/Right Bushings for “Roller, Exit” <Lubrication Type> G-26 <Lubrication Amount> • Evenly apply inside the bushings.	• Do not attach the grease to the paper path. • Use a syringe to apply it.
8	<Lubrication Point> • Contact points between “Holder, Pulley Driven” and “Frame, Upper” <Lubrication Type> G-26 <Lubrication Amount> • 2 mm long for each point.	• Apply that the holder slides only with spring force after applying grease. • Use a syringe to apply it.

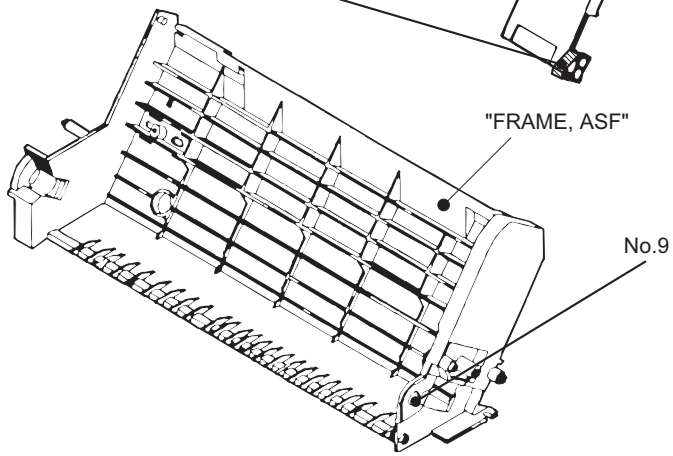
Table 6-4. Lubrication Point

No.	Lubrication Type/Point	Remarks
9	<Lubrication Point> • ASF; The round hole in the right frame of ASF (to hold the roller shaft) <Lubrication Type> G-26 <Lubrication Amount> Evenly apply inside the hole.	• Avoid applying grease to “Roller, Assembly, LD”
10	<Lubrication Point> ASF; Contact points between “Hopper” and “Lever, Hopper, Release”. <Lubrication Type> G-26 <Lubrication Amount> Evenly apply lubrication to the points.	• Completely wipe off any grease sticking out to the inner side of ASF.
11	<Lubrication Point> The round cutout in the left frame of ASF (“Gear,34” is inserted to the cutout) <Lubrication Type> G-26 <Lubrication Amount> Evenly apply inside the hole.	• Completely wipe off any grease sticking out to the inner side of ASF.
12	<Lubrication Point> Oil pad in the carriage assembly. <Lubrication Type> O-12 <Lubrication Amount> 0.7cc **Note:** This is the amount to be applied to a new oil pad.	Lubricate the oil pad only when; *Replacing the carriage assembly. *Replacing the oil pad Use a precise syringe to apply it. If you accidentally apply too much oil to the oil pad, throw the pad away and take a new one again. Leave the oil pad for a while to wait until oil is evenly infiltrated, then install it on the carriage assembly.

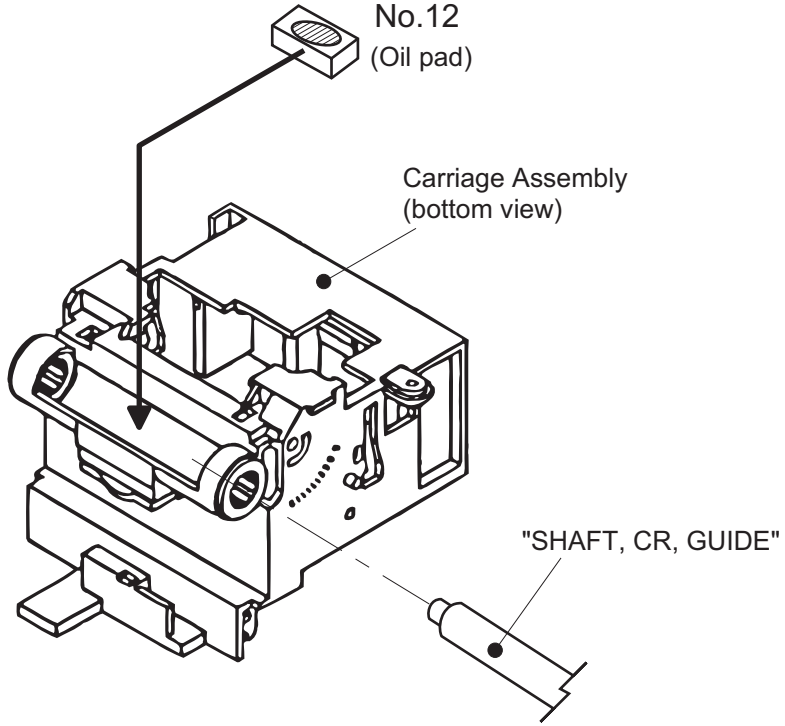








Never apply the oil exceeding 0.6cc.



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7

APPENDIX

7.1 Connector Summary

7.1.1 Major Component Unit

Major component unit of this printer is as follows.

- ☐ Control Board (C259 MAIN or C264 MAIN)
- ☐ Power Supply Board (C257 PSB/C257 PSE)
- ☐ Control Panel (C209PNL)
- ☐ Printer Mechanism (M-4M11)

The figure below shows how these components are connected.

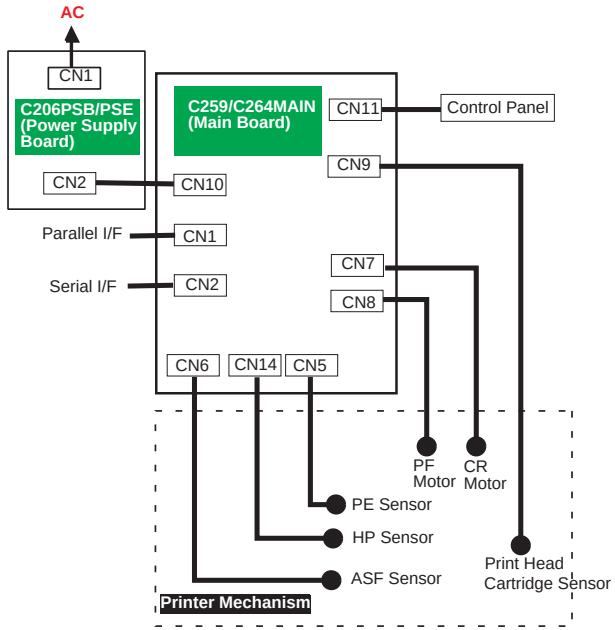


Figure 7-1. Connection of the Major Components

Table 7-1. Connector Summary for C259Main

Connector	Function	Table to refer.
CN1	Parallel Interface Connector	Parallel Interface(forward channel) (See page -14)
CN2	Mac.Serial Interface Connector	Serial Interface (See page -18)
CN3	SUB Interface Connector	USB(Universal Serial Bus) interface (See page -19)
CN4	HP Sensor	Table7-2
CN5	PE Sensor	Table7-3.
CN6	ASF Sensor	Table7-4
CN7	CR Motor	Table7-5
CN8	PF Motor	Table7-6
CN9	Print Head	Table7-7
CN10	Power Supply Connector	Table7-8
CN11	Control Panel	Table7-9

Table 7-2. Connector CN4

Pin	Signal Name	I/O	Function
1	HP	In	Sensor detect signal
2	GND	---	Ground
3	HPV	---	Sensor Power Supply

Table 7-3. Connector CN5

Pin	Signal Name	I/O	Function
1	PE	In	Sensor detect signal
2	GND	---	Ground
3	PEV	---	Sensor Power Supply

Table 7-4. Connector CN6

Pin	Signal Name	I/O	Function
1	ASF	In	Sensor detect signal
2	GND	---	Ground
3	ASFV	---	Sensor Power Supply

Table 7-5. Connector CN7

Pin	Signal Name	I/O	Function
1	CRA	Out	Phase drive signal (A)
2	CR-A	Out	Phase drive signal (-A)
3	CRB	Out	Phase drive signal (B)
4	CR-B	Out	Phase drive signal (-B)

Table 7-6. Connector CN8

Pin	Signal Name	I/O	Function
1	PFA	Out	Phase drive signal (A)
2	PFB	Out	Phase drive signal (B)
3	PF-A	Out	Phase drive signal (-A)
4	PF-B	Out	Phase drive signal (-B)

Table 7-7. Connector CN9

Pin	Signal Name	I/O	Function
1	BCO	In	Black ink cartridge detect signal
2	CCO	In	Color ink cartridge detect signal
3	THM	In	Thermistor detect signal
4	GND	---	Ground
5	LAT	Out	Head data latch pulse output
6	GND	---	Ground
7	S16	Out	Head data output (6)
8	S15	Out	Head data output (5)
9	S14	Out	Head data output (4)
10	S13	Out	Head data output (3)
11	S12	Out	Head data output (2)
12	S11	Out	Head data output (1)
13	GND	---	Ground
14	CLK	Out	Clock pulse for head data transfer

Table 7-8. Connector CN9

Pin	Signal Name	I/O	Function
15	GND	--	Ground
16	NCHG	Out	All Head On Pulse Output
17	GND	--	Ground
18	VDD	---	Logic power supply (+5V)
19	GND2	--	Ground
20	GND2	---	Ground
21	GND2	---	Ground
22	GND2	---	Ground
23	COM	---	Head Drive Power Supply
24	COM	---	Head Drive Power Supply
25	COM	---	Head Drive Power Supply
26	COM	---	Head Drive Power Supply
27	VHV	---	Head Drive Voltage Control Signal

Table 7-9. Connector CN10

Pin	Signal Name	I/O	Function
1	+42V	---	Mechanism Drive Power Supply
2	+42V	---	Mechanism Drive Power Supply
3	GND	---	Ground
4	GND	---	Ground
5	PSC	Out	Power Supply Switch Output Signal
6	GND	---	Ground
7	GND	---	Ground
8	+5V	---	Logic Power Supply

Table 7-10. Connector CN11

Pin	Signal Name	I/O	Function
1	SW2	In	Panel Switch on/off (2)
2	SWO	In	Panel Switch on/off (0)
3	PSC	In	Power on/off switch
4	SW1	In	Panel switch input (1)
5	LED3	Out	LED drive signal (3)
6	+5V	---	Logic power supply
7	+5V	---	Logic power supply
8	LED2	Out	LED drive signal (2)
9	GND	---	Ground
10	LED1	Out	LED drive signal (1)
11	GND	--	Ground
12	LE0	Out	LED drive signal(0)

7.2 Component Layout

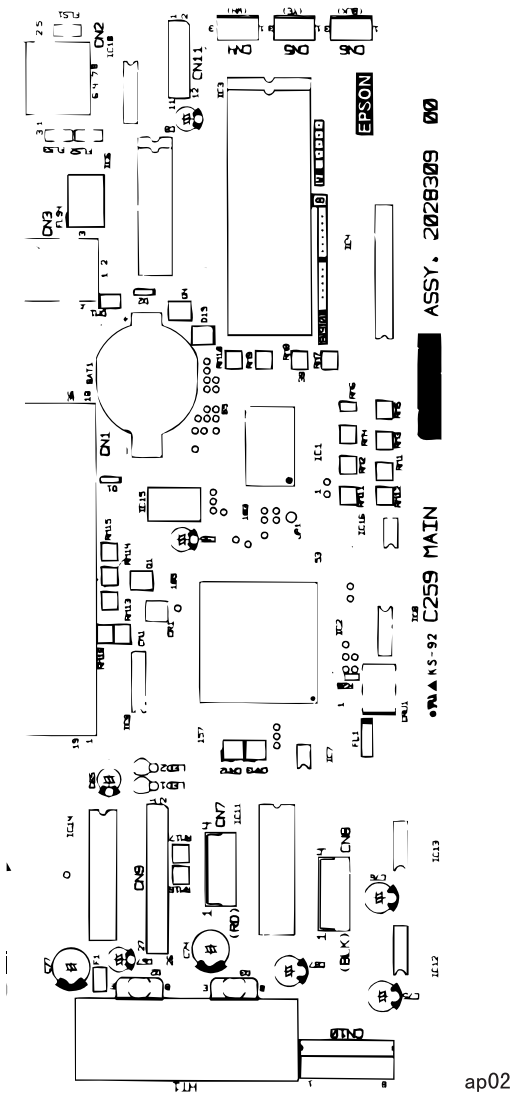


Figure 7-2. C259 Main Component Layout

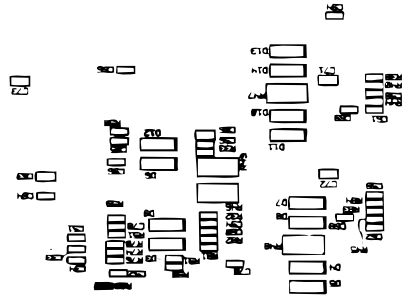
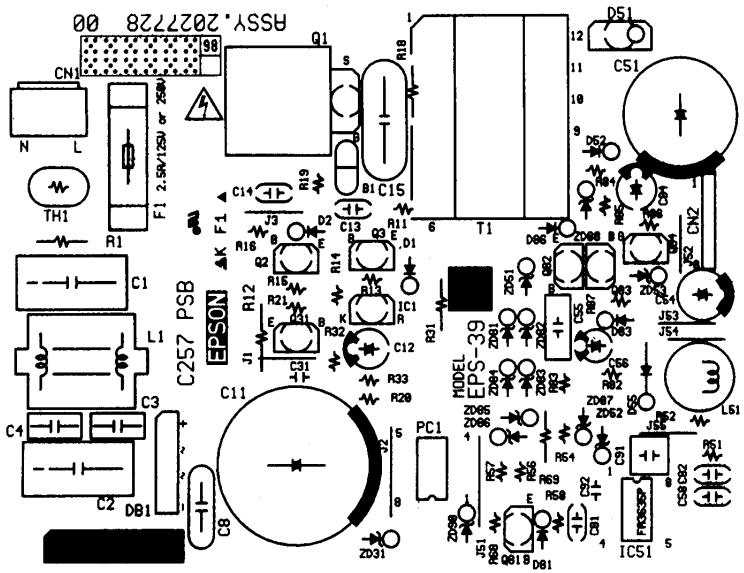


Figure 7-3. C259 Main Component Layout (Soldered Side)

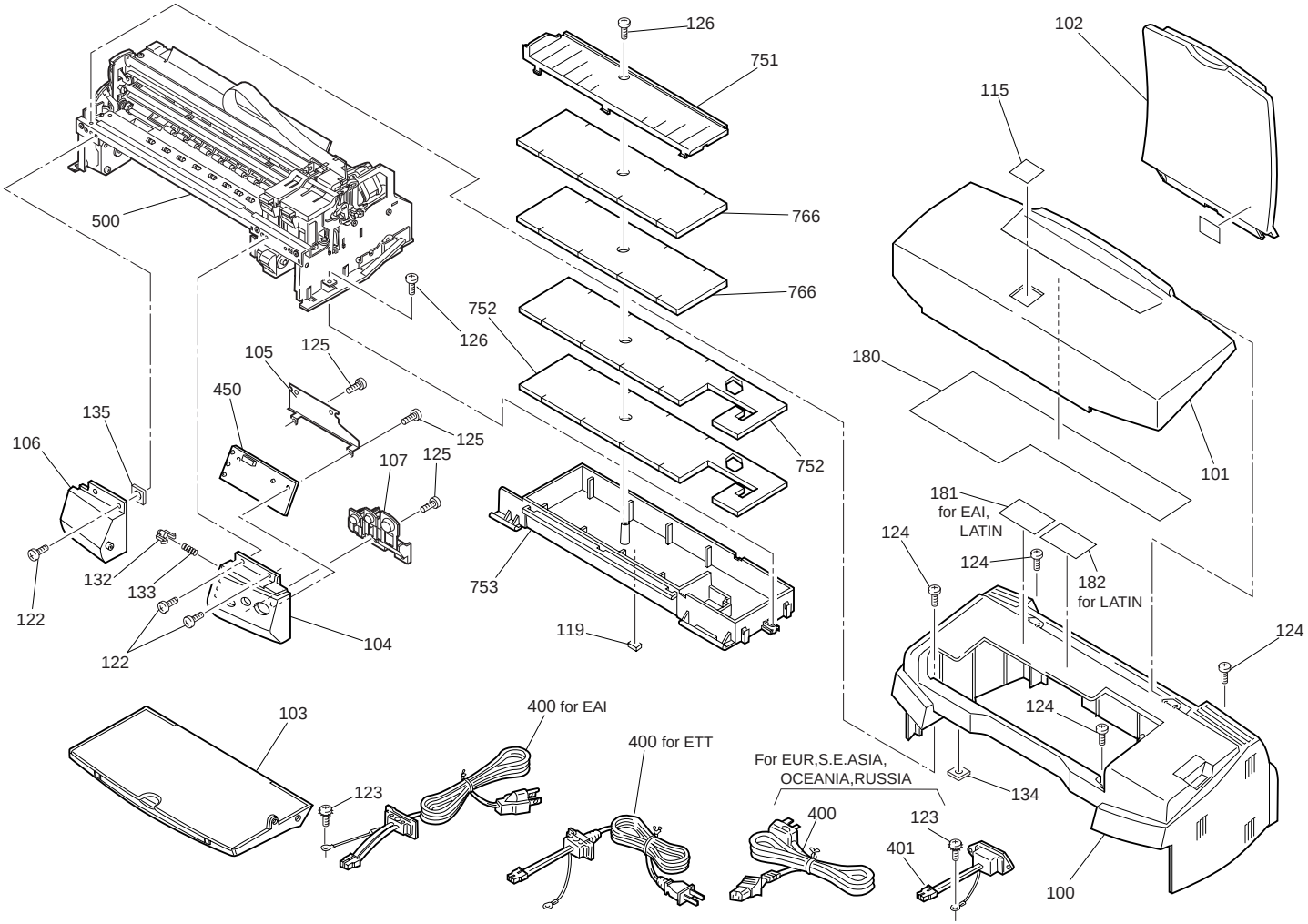


ap04

Figure 7-4. C257PSB Component Layout

7.3 Exploded Diagram

Following pages shows exploded diagram of Stylus Photo 750.



EXPLODED DIAGRAM FOR EPSON STYLUS PHOTO 750 (1/3)

Figure 7-5. Exploded Diagram-1

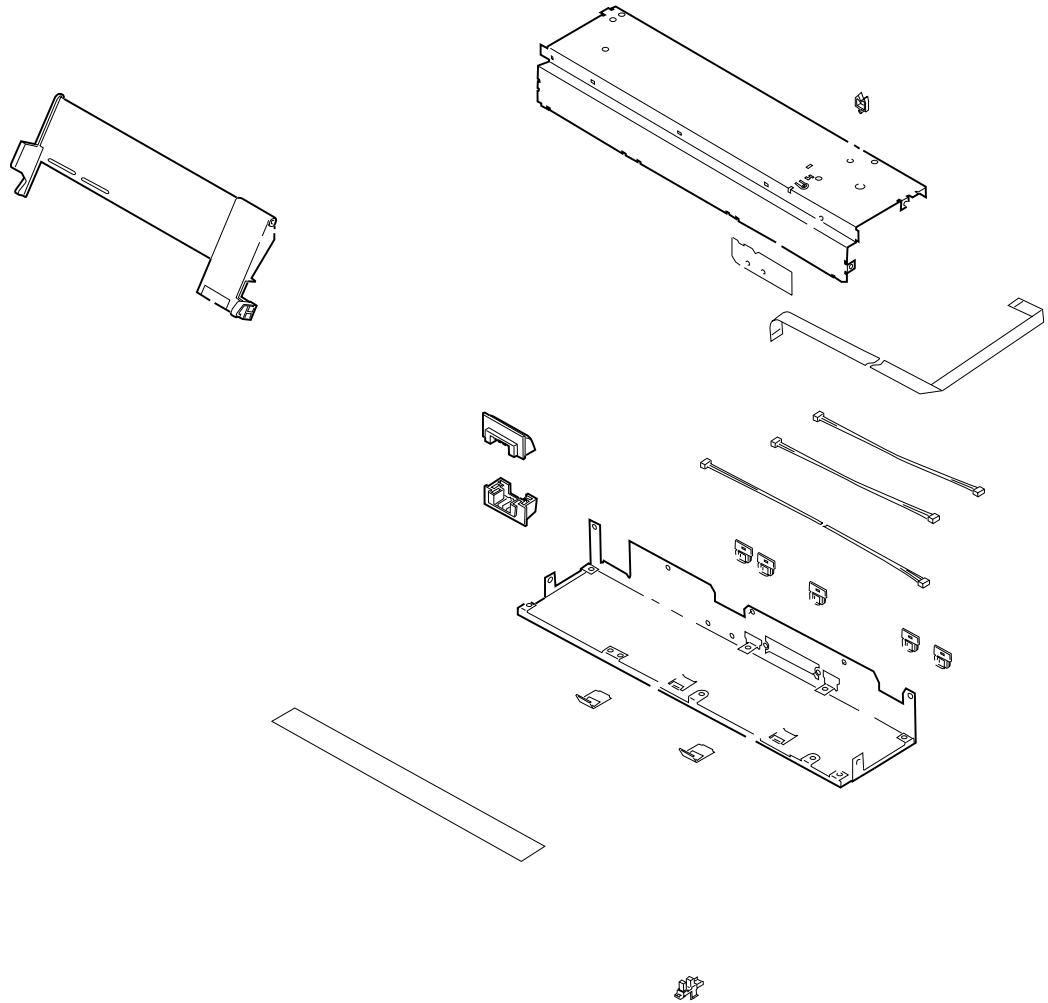


Figure 7-6. Exploded Diagram 2

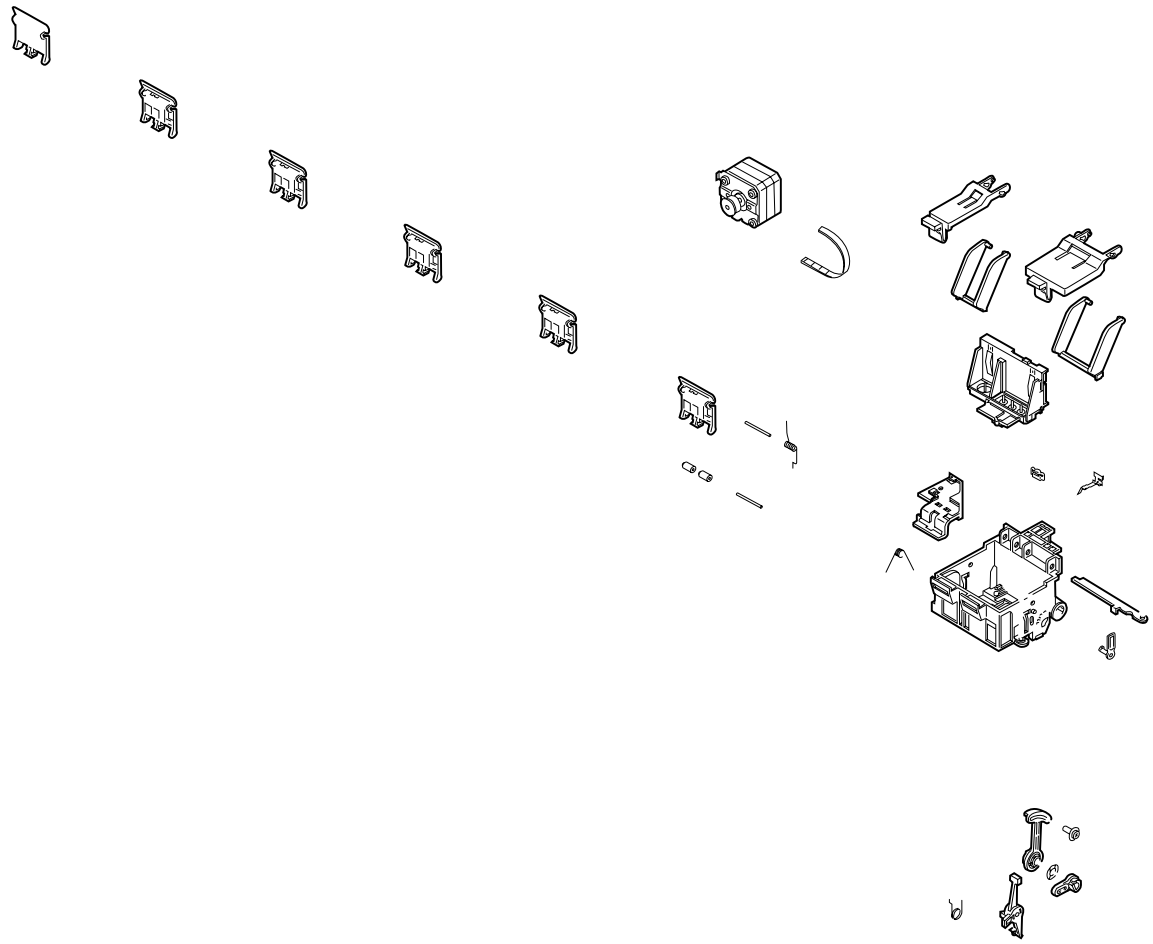
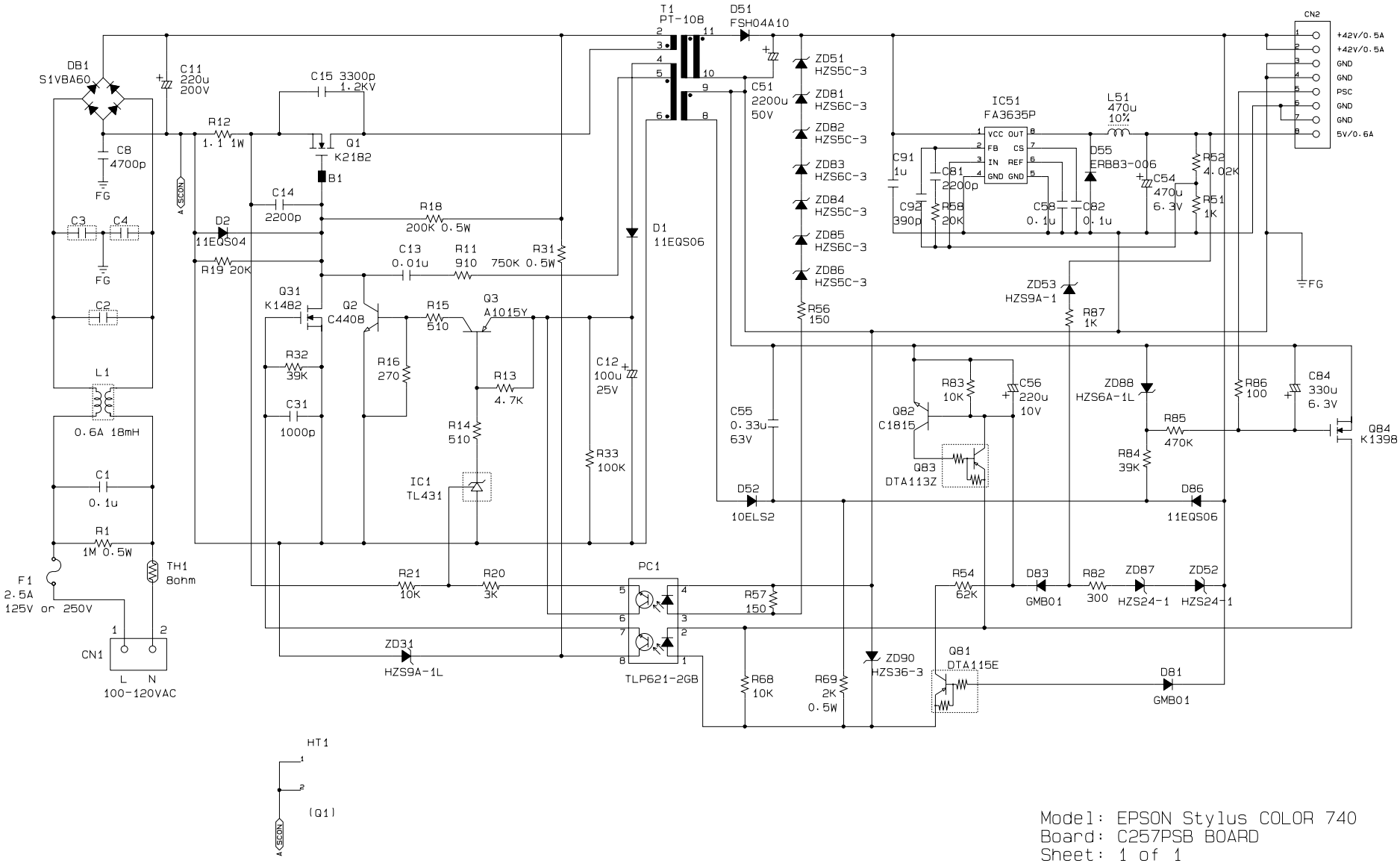


Figure 7-7. Exploded Diagram 3

7.4 Electric Circuit

Next pages shows the following electric circuits.

- C259(or C264) MAIN Control Circuit
- C257 PSB/C257 PSE Power Supply Circuits



Model: EPSON Stylus COLOR 740
Board: C257PSB BOARD
Sheet: 1 of 1
Rev.: A

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